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CORPORATION OF MADRAS



RIPON BUILDING

ANNUAL REPORT

OF

HEALTH DEPARTMENT

FOR

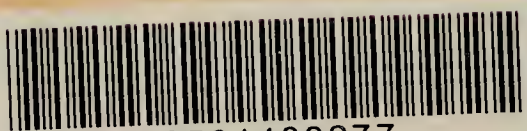
1964

PRESENTED BY

Dr. A. RAMACHANDRA RAO, M.B.B.S., B.S.Sc.

HEALTH OFFICER, CORPORATION OF MADRAS.

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CORPORATION OF MADRAS



ANNUAL REPORT

OF

THE HEALTH OFFICER

FOR

1964



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COMMISSION OF THE GENERAL INVESTIGATIVE BOARD



OFFICE OF THE SECRETARY

WASHINGTON, D.C.

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FORWARDED

While placing the Annual Report of the Health Officer for the Calendar year 1964, I have to place on record, the valuable services rendered by late Dr. B.V. Sundarababu, who had been the Health Officer of the Corporation of Madras for 8 years, and who passed away suddenly on May 20th, 1964. In his death the Corporation has lost a nice and able officer.

Dr. I. Gopalakrishnan, Circle Health Officer, VII Circle was placed in additional charge of the post of the Health Officer till December 11th, 1964 when Dr. A. Ramachandra Rao, the present Health Officer, has taken over the post.

The year under review witnessed two fairly big Epidemics, one, the unprecedented and unusual epidemic of Dengue-like-fever which was partly due to the Virus of Chikun-gunya on the wake of which the City had the other Epidemic, the Cholera. Small-Pox prevailed as endemic throughout, but it was gratifying to note that though the year 1964 was peak year, the incidence was less than the previous year. National Small-Pox Eradication Programme was in full swing throughout this year and it is hoped that the fruits of this programme would be reaped in the years to come.

The infant mortality rate which is recognised as the Index of the general sanitary level of any country was maintained low. It was lower than that of the previous year.

I am happy to note that the various laboratory services rendered by the Health Department have been quite useful particularly the contribution made by the I.D. Hospital not only in rendering medical relief to the suffering but also in the field of research especially in Small-Pox, which has earned recognition all over the world.

The sanitation of the Food establishments and markets and the Prevention of Food Adulteration require more vigorous and energetic tackling; Food adulteration is rampant and the sanitation of hotels and eating establishments in a majority of cases is not upto the mark. But in all these aspects of the public health work, the department alone cannot do much unless the public also co-operate with the Corporation in booking the offenders. I am sure that the Health Officer and his staff will bear these in mind and do something to tighten up the machinery in tackling these aspects of public health effectively.

Another aspect of the public health activity that requires proper attention is the medical examination of school children. It is the aim of the Corporation to see that every child studying in Corporation Schools is medically examined every year and that all the children found defective are treated and followed up. In this aspect also the Health Officer and his staff have been asked to do something and come up with proposals for re-organisation.

I do not propose to go into any more details of the report since it will be only a repetition of what the Health Officer has said in his presentation of the report. I have to place on record the excellent services rendered by the Health Officer and his Assistants in implementing various measures to control epidemics in the City during the year, despite several handicaps. No pains will be spared to make the City more healthy and sanitary than what it is now.

J. A. AMBASANKAR,
Commissioner,
Corporation of Madras.

RIPON BUILDINGS,
MADRAS-3.

Dated: 24-9-65.

CORPORATION OF MADRAS

HEALTH DEPARTMENT

ANNUAL REPORT FOR 1964

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INTRODUCTION

The essence of a good local self Government lies not only in the recognition of the importance of Health Administration but more than that implementation of the policies of the Health Department and providing better sanitary conditions to the people at large and protect them from the various Health Hazards. Health is not simple absence of sickness or infirmity, but it is much more than that, it is in the words of World Health Organisation "a State of Physical, Mental and Social well being".

So one should appreciate the enormous nature of the task of the department and the various handicaps which the Department has to face. It is impossible therefore for the department alone to do everything unless every citizen actively co-operates in every activity and offers healthy and constructive criticism. The growing consciousness by the people of the various civic problems especially in the field of Public Health, is really a welcome sign, since this will lead to healthy criticism of the department which only helps in further improvement of the departmental activities. The department admits that all is not well but with all its limitations, it has been trying to do something and will try to do better with the active co-operation of the Honourable Members of this august house and the Citizens of Madras.

With a view to have an effective control over the decentralised circle administration and to relieve the Health Officer with twin responsibilities of sanitation and cleansing of the City, the cleansing section was entrusted to the Assistant Commissioners of North and South Districts with effect from 1-7-1964, and the results of this separation are being watched.

POPULATION:

According to 1961 Census, the population of the City was 17,29,141 as against the mid-year population estimated by the Director General of Health Services during 1964 is 18,34,000. The calculated population by natural increase method i.e. (excess of births over deaths) shows 18,56,872 for 1964.

BIRTHS:

The recorded total births of the City during 1964 was 73,566 as against 73,787 of 1963. The birth rate has slightly declined to 40.11 per mille as compared to 40.94 of last year.

DEATHS:

Slight increase in deaths was recorded during the year. The total number of deaths registered was 31,998 and the rate was 17.44 as against 30,555 deaths and rate of 16.95 per mille during 1963.

INFANTILE MORTALITY:

The mortality rate among infants recorded slight reduction over that of last year. During the year under review number of deaths under 1 year were 7,803 and the rate was 106.06 as against 7,944 and 107.66 of the previous year.

MATERNAL MORTALITY:

The mortality rate as a result of child bearing showed a considerable decrease over that of 1963, i.e. from 1.93 to 1.78 during 1964.

EPIDEMIC AND ENDEMIC DISEASES :

Eventhough Small-Pox prevailed in epidemic form in the first half, and in an endemic form in the second half of the year, the number of persons affected were less than that of the previous year. 2,201 attacks and 491 deaths were recorded during the year as against 2,378 and 577 deaths of previous year, though 1964 was a cyclic epidemic year for the City.

The National Small-Pox Eradication Programme sponsored by the Government of India for a period of one year from 2-10-1963 and launched in the city under the supervisory control of the Health Officer was continued during the whole of 1964 and the period was extended till 30th September, 1965. During the year 1964, 30 divisions in the North and 27 in the South were covered and 4,16,807 and 3,14,400 vaccinations were done in the North and South Districts respectively. The "attack phase" of programme is being continued. The whole City expected to be completed within the stipulated period.

An unprecedented epidemic of "Dengue-like-fever" broke out in the City in the month of July affecting some lakhs of persons but fortunately the mortality was very low when compared to Dengue epidemics that have occurred in 1962 at Calcutta, Singapore and Thailand, etc.

On the wake of the epidemic of Dengue-like-fever, Cholera broke out in an epidemic form in the month of September 1964. Most of the Northern parts of the City were affected. A total of 2,163 attacks were recorded out of which 130 cases proved fatal which works out to 6% only which is the lowest case fatality ever recorded in the City for Cholera.

VACCINATION AND INOCULATION:

Along with the work done by the divisional staff a total of 9,60,599 vaccinations were done against Small-pox, 1,18,537 inoculations against Cholera, and 6,758 inoculations against Typhoid were performed in the year 1964.

In addition to these 2,932 vaccinations and 5,141 inoculations were done to the International Travellers and 8,073 certificates were issued during the year under review.

ANTI-MOSQUITO OPERATIONS:

The supervisory control of anti-mosquito operations in the City was transferred to the Assistant Commissioners, North and South Districts from the Senior Entomologist (N.M.E.P.). The staff allotted for each circle were placed under the direct supervision of the Circle Health Officers to have close check over their work. As usual all the breeding sources in the City were cleaned and treated with larvicides. The Pilot Filariasis Survey and Control Scheme continued during the year 1964 also and it is expected from the information that is derived from the Pilot Project, a proposal of Control of Filariasis in Hyperendemic areas of City will be placed before the Council for acceptance.

NATIONAL MALARIA ERADICATION PROGRAMME:

The National Programme of Malaria Eradication was continued in the City during 1964. The main plan of control in the City is the destruction of the larval and pupal stages of "ANOPHELES" which breeds in clear water collections in wells, cisterns, overhead tanks, etc. The surveillance wing of the programme is also continued and all the fever cases detected by them were treated with 4 aminoquinole tablets after taking blood smears for examination of malaria parasites and positive cases. Laboratory studies for investigation into mortality rate of mosquitoes caught and the effectiveness of different insecticides over them were carried out throughout the year.

CHILD WELFARE AND MATERNITY CENTRES:

As usual, child care and maternity services were under the supervisory control of the Lady Superintendent, Child Welfare Scheme. During the year, 46 Child Welfare Centres with 25 Maternity wards were maintained with a bed strength of 335. Besides these, 4 Creches with a daily strength of 73 children were also maintained to look after the children of the working mothers. 27,677 labour cases came under care and observation of Child Welfare Scheme during the year, in addition to the treatment meted out to the mothers at the out-patient clinics. Neo-Natal vaccination, against Small-pox and immunisation with Triple Antigen and Free milk distribution were carried out at the Maternity Centres.

MEDICAL RELIEF:

Free medical aid which has been one of the most important duties of this department was rendered through 53 dispensaries, 46 Child Welfare and Maternity Centres, one I.D.H. and 7 Special clinics. During the year one new dispensary was opened for the benefit of the local residents of Sharma-nagar.

MIDDAY MEALS SCHEME:

Supply of Midday Meals to increase the caloric intake of poor children attending Corporation Schools in the City was continued during the year 1964. Besides this, the under nourished children were also supplied with reconstituted milk. To quicken the process of cooking, steam plant was also installed at the Gopalapuram Midday Meal Centre.

MEDICAL INSPECTION OF SCHOOL CHILDREN:

The Corporation as a part of its health services to its citizens, is taking all possible steps to improve the health of children particularly those who are studying in Corporation schools in the City. With the existing complement of Medical Inspectors and Medical Inspectresses, all the children who attended the 310 Corporation schools in the City could not be medically checked up, within the period. Medicines like shark liver oil, calcium lactate, Iron, yeast, and Vitamin 'C' tablets were administered to cases like Mal-Nutrition, Anaemia, Stomatitis and so on. In addition to this, the children found with defective vision during examination were sent to Government Ophthalmic Hospital and Stanley Hospital, Royapuram for issue of prescriptions.

LABORATORY SERVICES:

The 4 Laboratories maintained by Health Administration continued to render useful services and helped a long way in better running of the dispensaries and other institutions. The Public Health Laboratory analysed 43,240 specimens of Blood, Sputum, Urine, Motion, etc., as usual. The Food Analyst Laboratory analysed 7,849 samples of various food stuffs which including 7,740 samples taken. Water Analyst Laboratory analysed a number of water samples drawn from main water supply source distribution system, infiltration Gallery Wells, etc., in the City. The Malaria Laboratory investigated the mortality rate of mosquitoes caught from different parts of the City and the effectiveness of different insecticides. Research Laboratories of I.D. Hospital have been doing extensive work in the field of Epidemiology, Pathology and treatment and prevention of Small-Pox. Several projects, W.H.O. sponsored as well as those sponsored with Indian Council of Medical Research are under study now.

ASHOK VIHAR:

In the style of Socio-Medical Health Centre, the Ashok Vihar continued to provide Medical, Social and recreational amenities to the poor families residing in the slums around the centre. Training to Medical, Nursing and Social

personnel from City educational institutions was also given. The centre extended its activities of training in handicrafts, provision of Maternity, Family Planning and Dispensary Services in addition to the maintenance of a Creche.

SLAUGHTER HOUSES:

To ensure supply of meat under hygienic conditions and to prevent transmission of diseases from animals to human beings the five Slaughter Houses in the City were continued to maintain under the control of Health Administration. Separate Slaughter Houses for cattle, sheep and pigs are designed and maintained at Perambur and Saidapet. During the year 27,764 cattle, 5,11,306 sheep and goat and 3,583 pigs were slaughtered under the direct supervision of the Assistant Veterinary Surgeon.

LETHAL CHAMBER:

In order to protect citizens from horrible and deadly disease "RABIES" mainly caused by rabid dogs, Lethal Chamber continued to act as destructive centre for the seized, unclaimed and rabid dogs in the streets of the City. During the year 14,262 dogs and 16,591 bitches were electrocuted.

FAMILY PLANNING:

45 Mother Information Centres of the Family Planning Scheme continued to function during 1964. 94,811 mothers were educated in planning their families and supplied contraceptives free of charge.

SPECIAL HOME:

Special Home for diseased, infirm and disabled beggars was continued to be maintained under the supervision of Health Administration during the year. The male and female beggars committed to the home under City Police Act were accommodated in separate wards. They are provided with food, clothing, medical aid, etc., besides training in handicrafts such as weaving and gardening during their period of conviction. The daily average number of beggars housed in the home during the year was about 200. It is felt that beggars suffering from leprosy should not be treated as criminals, but they should be treated as patients, like those suffering from any other diseases and should be retained in the home till they are free from infection. These facilities are not available at present in the Home, since the home is a committal home. The Government is being addressed in the matter to delete this home from the list of Committal Homes and maintain this as a hospital for patients suffering from skin cases.

ZOOLOGICAL GARDENS:

Madras Zoological Gardens being one of the oldest Zoos in India continued to be maintained with a total livestock of 564 during the year 1964 also. The proposals to improve the livestock and accommodation of the Zoo were under consideration during the year. As usual, Wild Life Week was celebrated during the month of October. An Ocean Wave Merry-go-round set was installed in the Children's play ground inside the compound to recreate the visiting school children.

MILK DISTRIBUTION SCHEME:

The distribution of reconstituted milk to the children attending Corporation schools was stopped during the year 1964, for want of sufficient stock of Milk Powder. Out of 2,000 cases of milk powder donated by the Catholic Relief Services 1,351 cases were lent to the State Hospitals and Military Camps for the emergency use, out of the remaining stock 654 cases were utilised for preparing curd-bath at Mid-Day Meal Centres and the balance was in stock. The benefit of free milk supply will be restored soon after the stock provision improves.

COMMUNITY CENTRES:

The two Community Centres at St. Xavier Street (Seven Wells) and Bogipalayam (Pulianthope) continued to be utilized by citizen to the fullest advantage. In addition to these the construction of similar centres at Royapuram, Sembiam, Meenambal Sivaraj Nagar, Chintadripet, Triplicane, Teynampet and T'Nagar was taken up during the year and the two centres at Meenambal Sivaraj Nagar and Mirasahibpet were nearing completion. The total number of functions conducted at St. Xavier Street and Bogipalayam was 125 and 107 respectively.

HEALTH EDUCATION AND PROPOGANDA:

As usual propoganda on health subject was carried out throughout the City especially in slums and hutting grounds to educate the masses in preventive aspects of infectious diseases and up-keep of environmental hygiene and sanitation. Besides this, the co-operation of the public enlisted through propoganda towards Small-pox Eradication Programme launched in the City. During anti-fly week compaign and World Health Organisation Annual Celebrations, Propoganda of health matters was organised in various divisions. Totally 433 trips were made covering 31 divisions during the period under review.

OTHER ACTIVITIES:

In addition to the maintenance of various institutions for the benefit of public, the Health Administration was also in charge of 12 public markets, 11 Dhobikhanas, 5 Homes for Homeless, 4 public cattle yards, 9 Cattle depots, 5 Veterinary Dispensaries, 32 Birth and Death registration offices, 63 Burial and Burning Grounds and 46 Child Welfare and Maternity Centres in the City.

The patients suffering from leprosy were provided with facilities for hospitalisation at Central Leprosy and Research Institute, Tirumani, Chingleput by contributing capitation grant to maintain separate wards for patients recommended by the Health Officer.

The old and disabled persons were also continued to be maintained at the Monegar and Raja of Venkatagiri Choultry's poor home at Monegar Choultry Road, Royapuram.

CONCLUSION:

In a City with rapid growth of population and rapid industrialisation with a heavy floating population, it is not very easy to expect ideal conditions, and freedom from nuisances. There are multitude of problems which require immediate solution. For example sanitation of food establishments leaves much to be desired. The school medical inspection requires re-organisation so that every child in Corporation schools is examined every year and is followed up. Health Education is to be placed on a more modern footing. Small-pox has to be completely rooted out. General sanitation has to be improved so that we need not worry about Cholera, Dysentery and Typhoid, etc., we have done something better in recent years, and we hope to do more in the coming years. I take this opportunity to thank the Commissioner, whose able guidance was mainly responsible for this amount of achievement we have made. I thank all the Assistant Officers and Lady Superintendent, Child Welfare Scheme and all other staff in the field and indoor for their whole hearted co-operation in the administration. I offer my grateful thanks to the Heads of all the departments and their staff, who have actively co-operated with me and my staff in the health administration of the City.

RIPON BUILDINGS,
MADRAS-3.

Dated: 30-9-1965.

A. Ramachandra Rao,
Health Officer,
Corporation of Madras.

1. IMPORTANT STATISTICAL DATA

1. Area	..31,90,09,920 acres (or) 49.74 Sq. miles
2. Population as per the Census of 1961	.. 17,29,141
3. Population estimated for the mid year 1964	.. 18,34,000
4. Population calculated on the natural increase method (excess of Births over Deaths)	.. 18,56,872
5. Average density per Sq. Mile	..373.32 per Sq. mile
6. Births excluding Still births	.. 73,566
7. Deaths excluding Still births	.. 31,998
8. Still births	.. 1,534
9. Birth rate as per estimated Mid-year population	.. 40.11
10. Birth rate as per population calculated on the natural increase method (excess births over deaths)	.. 39.61
11. Death rate as per estimated Mid-year Population	.. 17.44
12. Death as per population calculated on the natural increase method (excess of births over deaths)	.. 17.23
13. Natural increase	.. 41,568
14. Rate of natural increase per 1,000 of estimated popula- tion	.. 22.66
15. Still Births per 1,000 births (Live and Still)	.. 20.42
16. Infant Deaths	.. 7,803
17. Infant Mortality rate	.. 106.06
18. Maternal Deaths	.. 134
19. Maternal Mortality rate	.. 1.78
20. Total No. of Small-pox cases reported	.. 2,201
21. Total No. of Deaths due to Small-pox	.. 491
22. Total No. of cases of Cholera reported	.. 2,163
23. Total No. of Deaths due to Cholera	.. 130
24. Total No. of Primary Vaccinations done including N.S.E.P.	.. 78,120
25. Total No. of Re-vaccinations done including N.S.E.P...	8,82,479
26. Anti-Cholera inoculations done	.. 1,18,537



SECTION - A

STATISTICAL INFORMATION

SECTION-A

1. The following are the main features of the Indian Constitution:

2. METEOROLOGICAL DATA

The Meteorological conditions of Madras City recorded during the year 1964 is appended to the Statistical Supplement (Statement-1).

Rain Fall:—The total Rain fall recorded at the Nungambakkam observatory was 54.39 as against 52.18 inches for the year 1963.

The following statement shows the rain fall recorded from 1955 to 1964 (Month wise).

MADRAS NUNGAMBAKKAM RAIN FALL (In Inches)

Month	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
January ..	3.71	2.13	0.00	0.39	0.00	1.70	2.7	0.10	3.82	0.00
February..	1.10	0.00	0.20	0.01	0.87	0.00	0.5	0.10	0.00	0.00
March ..	0.00	0.00	0.00	0.00	0.00	Tr.	0.00	0.00	1.08	0.00
April ..	1.15	1.91	0.00	0.09	0.69	Tr.	0.00	0.12	1.98	0.00
May ..	7.13	0.90	0.40	2.78	0.49	0.32	0.8	4.42	0.29	0.06
June ..	1.89	3.59	1.39	1.79	2.01	1.77	3.9	3.57	2.54	1.09
July ..	3.73	4.47	5.59	1.77	2.60	2.51	8.5	4.11	1.83	4.18
August ..	9.71	6.36	5.48	7.37	1.98	1.28	10.1	6.69	6.31	7.72
September	1.93	8.37	3.59	1.62	3.34	10.82	7.3	5.36	3.44	5.23
October ..	8.99	6.76	8.59	16.43	13.51	9.19	8.0	20.55	10.01	5.76
November	7.56	7.22	16.63	18.25	11.98	33.45	6.9	3.15	14.32	29.40
December	4.74	3.72	0.11	3.61	1.42	5.68	0.4	6.46	6.16	0.95
	51.64	45.43	41.98	54.11	37.99	66.72	49.1	50.63	52.18	54.39

3. VITAL STATISTICS

(a) Population

The City population as per Census of 1961	..	17,29,141
Mid-year population of 1964 as estimated by the Director General of Health Services	..	18,34,000
The population calculated on the natural increase method (excess of Birth over Death)	..	18,56,872

(b) Births

	1964	1963
Total No. of Births registered during the year ..	73,566	73,787
The Birth rate calculated per 1,000 of the Mid-year estimated population ..	40.11	40.94
The Birth rate as calculated by natural increase method ..	39.61	40.64
The total No. of Still births during the year ..	1,534	1,651
Natural Increase ..	41,568	43,232
The rate of Still Births per 1,000 Births (Live and Still) ..	20.42	21.83

The Statement showing the No. of Registered Births Month-wise during the year 1964:—

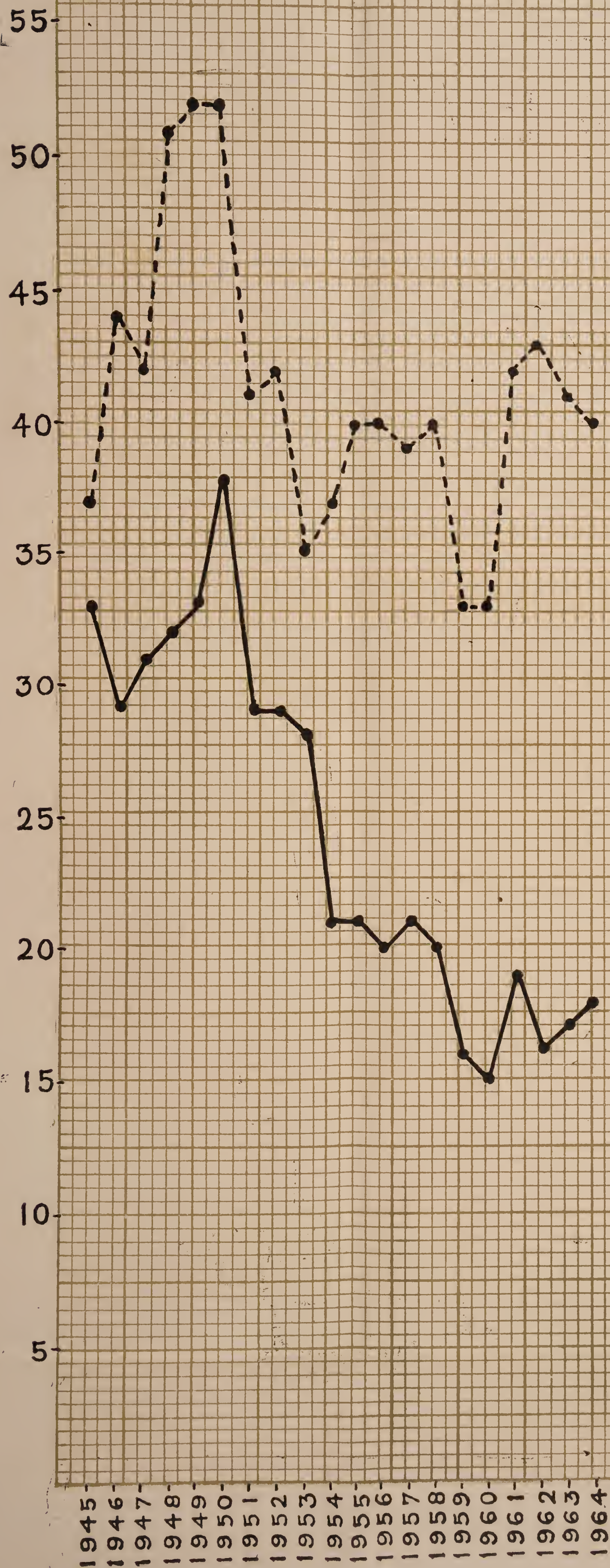
Quarter	Months	No. of Births	Quarterly total
First	January	2,650	11,121
	February	3,492	
	March	4,979	
Second	April	5,261	18,226
	May	6,572	
	June	6,393	
Third	July	7,907	17,165
	August	5,783	
	September	3,475	
Fourth	October	5,294	27,054
	November	6,908	
	December	14,852	
		73,566	73,566

The Statement showing the details of Births among the Principal Communities in the City:—

Communities	No. of Births registered		Total
	Males	Females	
Aliens ..	3	5	8
Anglo Indians ..	74	63	137
Indian Christians ..	1,453	1,453	2,906
Hindus ..	32,943	31,639	64,582
Muslims ..	2,994	2,915	5,909
Others ..	11	13	24
		37,478	36,088
		73,566	73,566

DIAGRAM
 ANNUAL BIRTH AND DEATH RATE IN MADRAS CITY.
 Births----- 1945 - 1964 Deaths—————

RATE PER MILLE



Scale:- 1 inch : 5 Numbers

Scale:- 1 Year : 0.2 inch.

The Statement of Births and Deaths, recorded in the City during the period 1955 to 1964 is furnished below with special reference to the natural increase:—

Year		Births	Deaths	Natural Increase or Decrease
1955	..	66,449	34,264	+32,185
1956	..	67,476	33,927	+33,549
1957	..	69,197	36,783	+32,414
1958	..	71,880	36,880	+35,000
1959	..	70,155	33,515	+36,640
1960	..	72,610	33,729	+38,881
1961	..	72,237	32,494	+39,743
1962	..	75,619	28,763	+46,856
1963	..	73,787	30,555	+43,232
1964	..	73,566	31,998	+41,568

(c) Deaths

		1964 as against 1963
Total No. of Deaths registered (Excluding Still Births)	..	31,998 30,555
Death rate as per estimated Mid-year population.	..	17.44 16.95
Death rate as per population calculated by the natural increase method (excess births over deaths)	..	17.23 16.83

Statement showing the number of Deaths registered during the four quarters of the year:—

Quarter	Month	No. of deaths	Quarterly total
First	.. January	2,226	
	February	2,307	
	March	2,144	6,677
Second	.. April	2,023	
	May	2,270	
	June	2,122	6,415
Third	.. July	2,537	
	August	2,579	
	September	3,273	8,389
Fourth	.. October	2,905	
	November	3,313	
	December	4,299	10,517
	Total ..	31,998	31,998

Deaths among the Principal Religious Communities

The occurrence of deaths community-wise as follows:—

Principal Communities	Males	Females	Total
Aliens ..	4	4	8
Anglo Indians ..	51	44	95
Indian Christians ..	742	697	1,439
Muslims ..	1,616	1,497	3,113
Hindus ..	14,098	13,202	27,300
Others ..	31	12	43
	<hr/> 16,542	<hr/> 15,456	<hr/> 31,998

The number of Births and Deaths registered with respective rates among the principal religious sects., and communities in the City during the year as compared with the previous years is furnished in the statistical supplemental Statement No. 10.

The Statement furnished below gives the age and sex-wise distribution of total deaths:—

Age-Group	Males	Females	Total	Percentage rate
Under 1 year ..	4,088	3,715	7,803	24.40
1 to 4 years ...	3,280	3,568	6,848	21.40
5 to 9 years ..	769	740	1,509	4.71
10 to 14 years ..	297	264	561	1.75
15 to 19 years ..	264	283	547	1.70
20 to 29 years ..	770	833	1,603	5.00
30 to 39 years ..	821	781	1,602	5.00
40 to 49 years ..	1,154	710	1,864	5.82
50 to 59 years ..	1,505	936	2,441	7.62
60 years and above ..	3,594	3,626	7,220	22.60
	<hr/> 16,542	<hr/> 15,456	<hr/> 31,998	<hr/> 100.00

Principal Causes of Deaths

	1964 as against 1963
Deaths due to Small-pox during the year ..	*573 *609
Deaths due to Cholera during the year ..	*153 *21
Deaths due to Respiratory Diseases during the year ..	7,466 6,556

*Including Mofussil Deaths.

The following Statement shows the figures under the Principal causes of Deaths with reference to Sex and the Rate per 1,000 estimated Mid-year Population:—

Cause of Death	Males	Females	Total	Rate per 1,000 esti- mated Mid-year population
Plague ..	..	..	..	..
Cholera ..	80	73	153	0.08
Small-pox ..	268	305	573	0.31
Measles ..	10	2	12	0.00
Malaria ..	4	1	5	0.00
Enteric fever ..	36	22	58	0.03
Other fevers ..	380	393	773	0.42
Dysentery ..	1,022	989	2,011	1.09
Diarrhoea ..	672	696	1,368	0.74
Tuberculosis (including T.B. of lungs) ..	495	311	806	0.43
Other respiratory dis- eases ..	3,812	3,654	7,466	4.07
Deaths due to child births ..	..	136	134	0.07
All other causes ..	9,763	8,876	18,639	10.16
	16,542	15,456	31,998	17.40

The Statement showing the number of infant deaths under different age groups under one year:—

Age Groups	No. of Infant Deaths
Under 7 days ..	1,955
Above 7 days and under one month ..	991
Above 1 month and under 6 months ..	2,405
Above 6 months and under 1 year ..	2,452
Total ..	7,803

The Statement showing the Infant Mortality rate recorded in the City since 1951:—

Year	Infant mortality rate
1951-1955	.. 157.98
1956-1960	.. 135.04
1960	.. 121.60
1961	.. 115.79
1962	.. 97.19
1963	.. 107.66
1964	.. 106.06

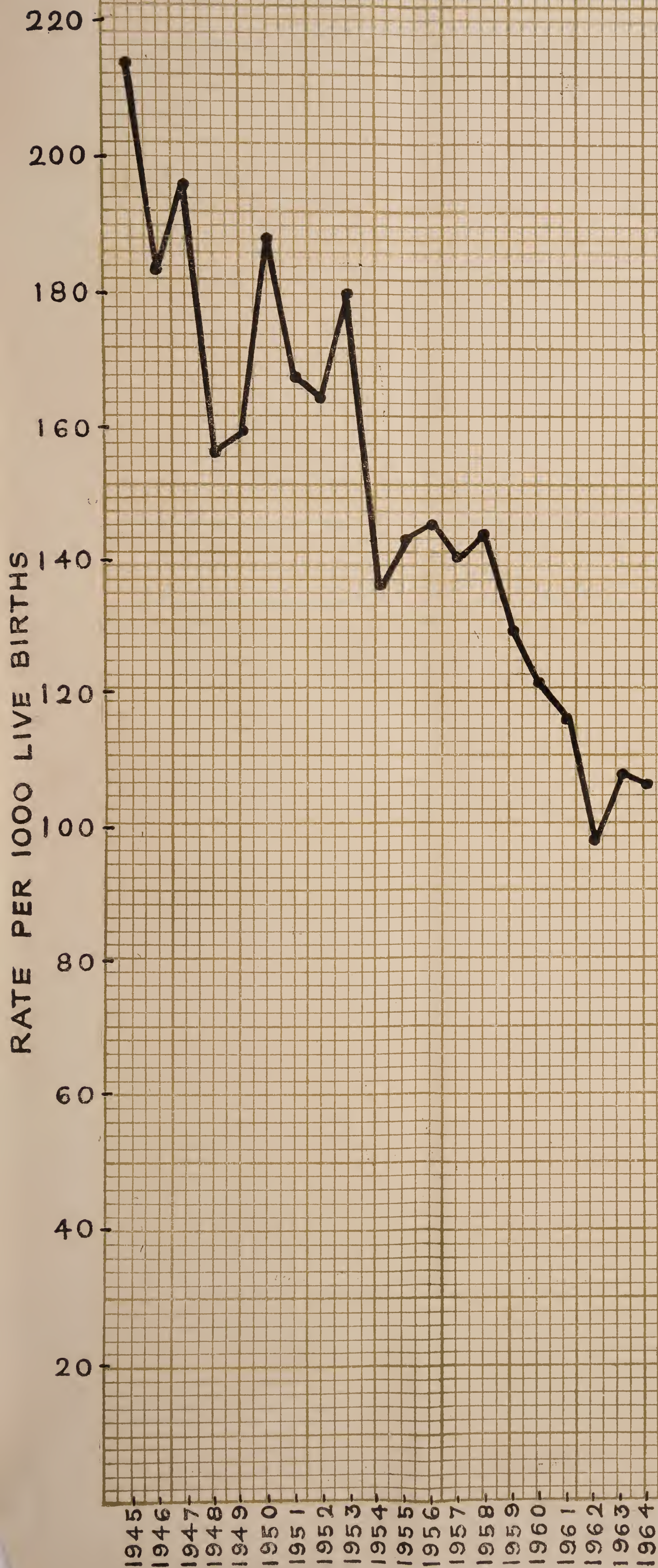
Statement showing the Principal Causes of Infant Deaths:—

S. No.	Cause of Death	No. of Deaths	Percentage of Total
1	Cholera	.. 5	0.06
2	Small-pox	.. 96	1.23
3	Measles	.. 4	0.05
4	Diphtheria	.. 6	0.07
5	Enteric fever	.. 2	0.02
6	Malaria	.. 1	0.01
7	Other fevers	.. 185	2.40
8	Dysentery	.. 475	6.10
9	Diarrhoea	.. 758	9.70
10	Infantile debility malnutrition including premature births	.. 1,630	20.90
11	Diseases of the respiratory system	.. 2,185	28.00
12	Convulsions	.. 55	0.70
13	Other diseases	.. 2,401	30.76
		7,803	100.00

Maternal Mortality

	1964 as against 1963
Deaths among the mothers as a result of child bearing	.. 134 146
Maternal Mortality rate	.. 1.78 1.93

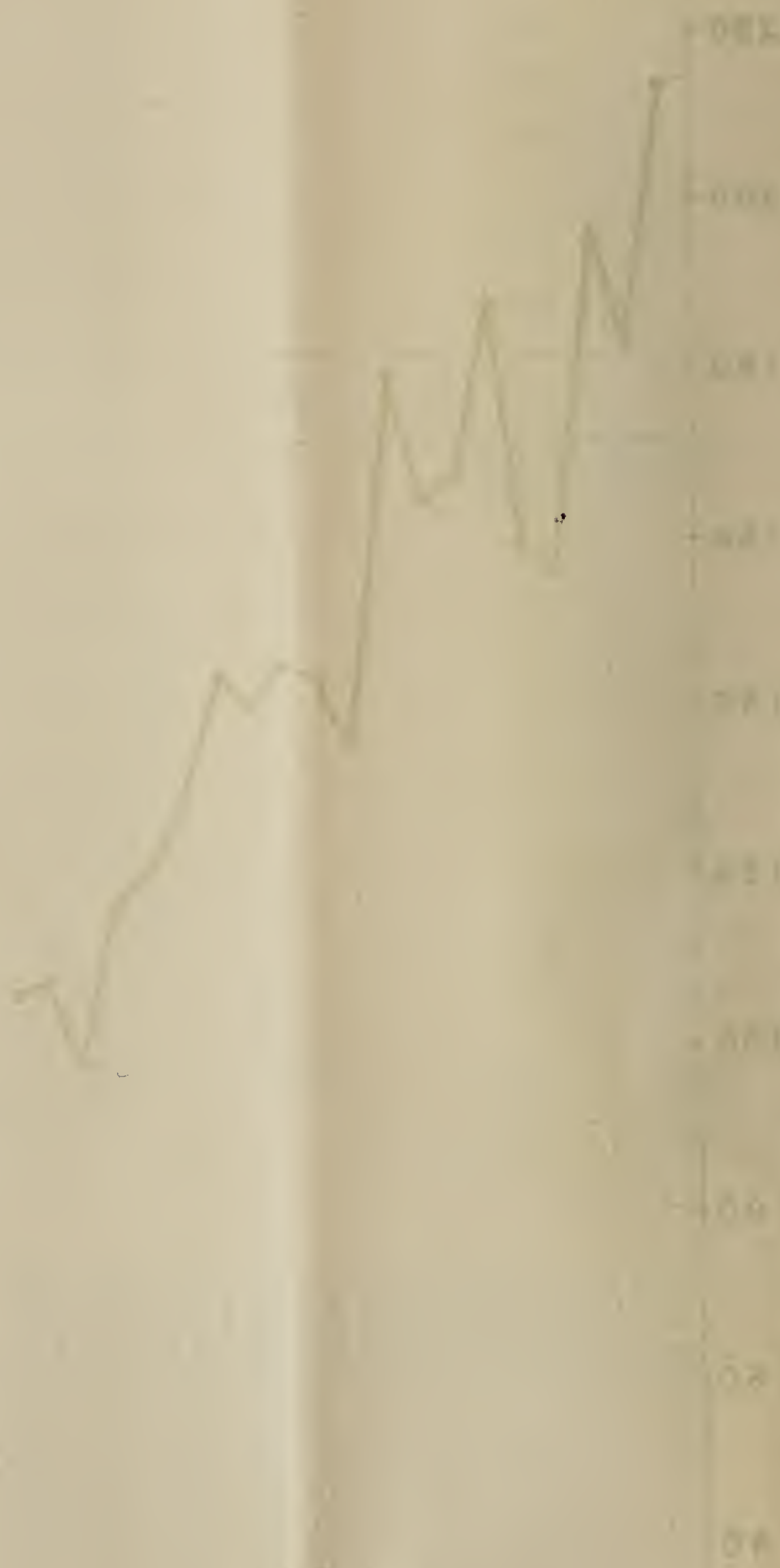
MADRAS CITY - INFANT MORTALITY RATES.



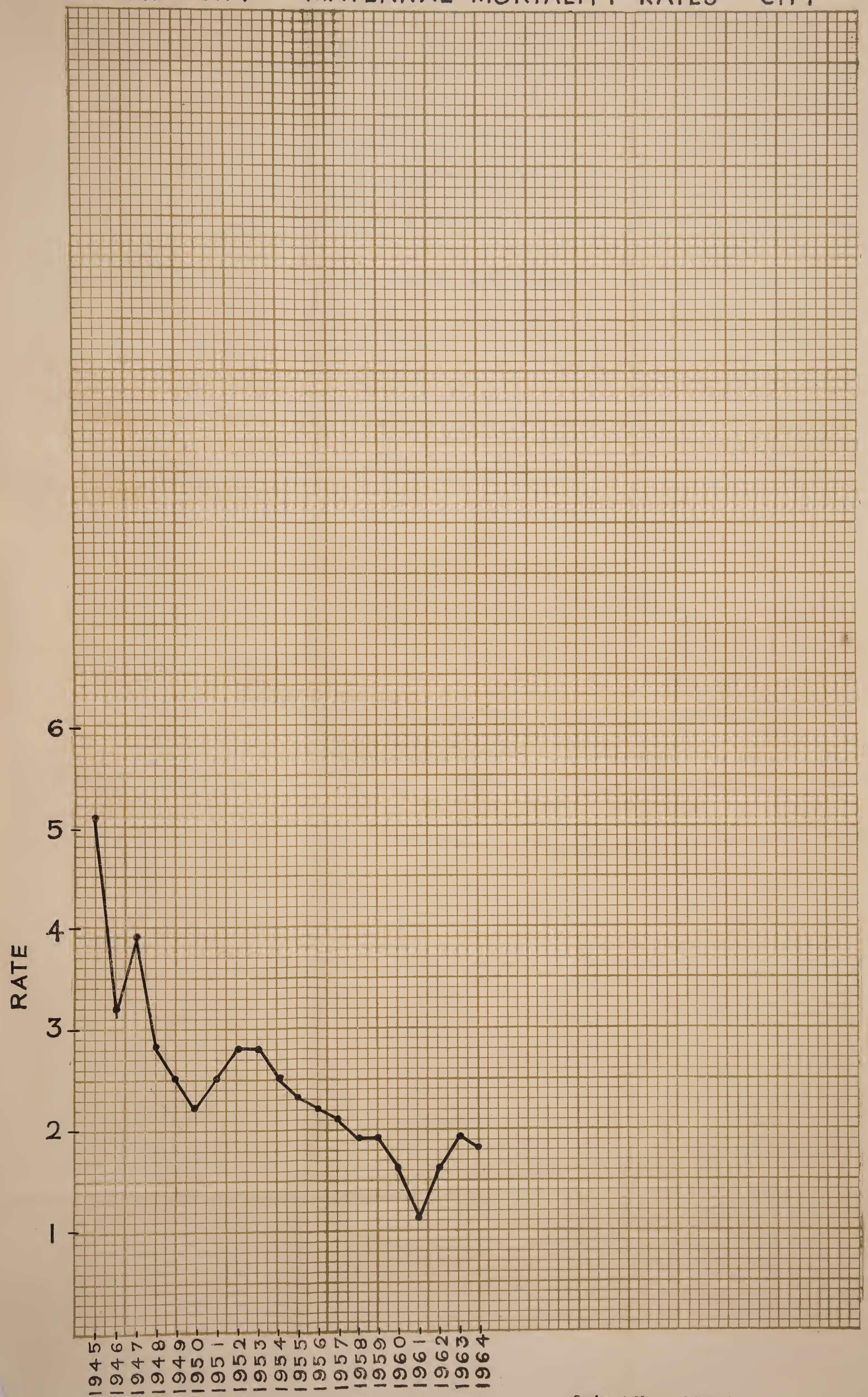
Scale:- 1 inch : 20 Numbers.

Scale:- 1 Year : 0.2 inch

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MADRAS CITY - MATERNAL MORTALITY RATES - CITY



Scale:- 1 Year : 0.2 inch

Statement showing Maternal Mortality rate 1955—1964:—

Year		Maternal deaths	Maternal Mortality rate
1955	..	156	2.34
1956	..	153	2.18
1957	..	150	2.08
1958	..	148	1.94
1959	..	140	1.58
1960	..	119	1.58
1961	..	83	1.12
1962	..	124	1.60
1963	..	146	1.93
1964	..	134	1.78

(d) Registration of Births and Deaths

Registration of Births and Deaths is compulsory in the City and is done in 31 Registration Centres, spread all over the City by trained full time Births and Deaths Registration Clerks under the immediate supervision of 10 Circle Health Officers in charge of 10 divisions each. Births and Deaths occurring in the City are being recorded since 1st April, 1868. Births and Deaths occurring in the State Hospitals, Nursing Homes, Clinics and Child Welfare Centres are reported by the respective authorities in the prescribed Birth and Death forms supplied to them. Births and Deaths occurring in the residences are reported by the concerned parties. Sanitary Inspector (in charge of Vaccination) verify all births registered within 7 days from the date of registration. Persons are prosecuted for not registering the Births and Deaths.

Nursing Homes and Clinics are increasing in the City day by day. The existence of some of the Nursing Homes and Clinics in the city is not even known to the Department and vital events occurring in such Nursing Homes are not promptly and correctly reported, with the result, the parties suffer, when they apply for Extracts of such births and deaths. It is therefore quite necessary, that all Nursing Homes and Clinics should be registered at the office of Health Officer, Madras in the interest of Health Administration in General and Vital Statistics in particular.

It is regrettable to note that reports of vital events furnished by the Hospital and Nursing Homes are not only not received regularly in time but also the particulars furnished by them in those reports are either incomplete or wrong in the majority of instances. The act provides that registration has to be done on the information furnished by the Hospital authorities. These defects are only found out when the parties apply for the true extract of Birth and Death. Hence the rule have to be amended in such a way that all events whether this occur in the Hospital or at Home have to be registered by the parties concerned and they have to sign in the register so that those amendment need not be done later.

1. Inhalation Diseases

Small-Pox		1964 as against 1963	
Number of attacks of Small-pox during the year	..	2,201	2,378
Deaths due to small-pox during the year	..	491	577
Case fatality rate	..	22.3 %	25.6 %

Months		City		Mofussil	
		Attacks	Deaths	Attacks	Deaths
January 1964	..	197	28	10	2
February 1964	..	323	66	53	7
March 1964	..	321	79	47	8
April 1964	..	190	35	22	6
May 1964	..	127	40	15	..
June 1964	..	149	33	27	10
July 1964	..	232	60	97	13
August 1964	..	180	44	93	20
September 1964	..	104	29	29	7
October 1964	..	147	37	18	2
November 1964	..	102	22	10	2
December 1964	..	129	18	31	5
		2,201	491	452	82

The following statement shows the incidence of Small-pox and the vaccination performed month-wise with regular divisional staff only (This is exclusive of vaccination done by N.S.E.P. Staff).

Months		Small pox		Primary and Secondary vaccinations	Re vaccinations
		Attacks	Deaths		
January 1964	..	197	28	5,479	25,444
February 1964	..	323	66	6,512	44,778
March 1964	..	321	79	5,488	34,129
April 1964	..	190	35	4,878	24,863
May 1964	..	127	40	3,167	28,889
June 1964	..	149	33	4,363	12,832
July 1964	..	232	60	4,346	13,247
August 1964	..	180	44	3,695	18,036
September 1964	..	104	29	3,867	15,116
October 1964	..	147	37	3,586	16,032
November 1964	..	102	22	3,114	11,064
December 1964	..	129	18	5,255	12,528
		2,201	491	53,750	2,56,958



SECTION - B

COMMUNICABLE DISEASES AND THEIR CONTROL

SECTION-B

COMMITTEE ON THE STATUS OF WOMEN

2201 attacks and 491 deaths from Small-pox were recorded in the City against 2,378 and 577 deaths during the previous year.

The City is almost hyperendemic for Small-pox and the usual endemic level has been about 1,500 to 2,000 a year. But periodically once in three years, the disease seems to take an epidemic form in the City. The larger number of cases were reported in 1958, 1961 and therefore 1964 should be the epidemic year. But still there were less number of cases than the previous epidemic year. The cases are also the lesser than those reported in 1963. This is a non-epidemic year. We will be able to control Small-pox though not eradication completely. It is worth to mention here that 181 of the total reported from outside the City. This shows that the areas surrounding are heavily infected and unless the Government tightens the measures in Chingleput District, it will affect the City adversely and this is partly responsible for the persistence of the infection in the City.

Necessary steps were promptly taken to check the spread of the disease in the City. Intensive house to house inspection was conducted throughout the City for the vaccination and Revaccination of unprotected children and adults. Vaccination was performed in hutting grounds, slums, kuppams, Platform dwellers, Markets, Lodging houses, Hostels, Bazaars, etc., with a view to protect the incoming and floating population. Vaccination was also conducted after dusk in slums and other infected areas to get at the labourers as they usually leave for the workshop very early in the morning and return home late in the evening. Revaccinations were conducted in public institutions such as offices, firms, factories, companies, colleges, schools, Mills, etc. As soon as a case was notified or detected the patient was immediately isolated at the Infectious Diseases Hospital. The Sanitary Inspectors examined all the contacts daily till the end of the incubation period.

Intimations were sent to the concerned Health authorities in all the cases of imported infection. The health propaganda officer conducted Health Education Lectures in the infected areas and their surroundings, explaining to the public about the prevalence of the disease and the precautionary measures to be taken to check the spread of the disease. 6,49,891 vaccinations were done by the N.S.E.P. staff in the City of Madras since 2-10-63 to 31-12-64.

National Small-Pox Eradication Programme which was inaugurated on 2-10-1963.

The local divisional staff have been instructed to concentrate more on the thickly populated areas, so that spread of the disease could be effectively arrested.

NATIONAL SMALL-POX ERADICATION PROGRAMME

(North District)

Report of work from 1-1-1964 to 31-12-1964.—The field work of the “attack phase” of the programme which commenced on 2-10-1963 continued its progress during the year 1964. Extension of the “attack phase” till 30-9-1965 was sanctioned during the year.

Staff.—The inadequacy of men and material were made up during the course of the year and the full sanctioned complement of 1 Non-Medical Health Educator, 10 Vaccination Supervisors and 60 Assistant Vaccinators were appointed by about the middle of the year. An additional complement of 10 Vaccination Supervisors and 60 Assistant Vaccinators was also sanctioned during the year, in order to accelerate the “attack phase”. A total strength of 120 Assistant Vaccinators functioned from the fag end of the year. Out of this 120 Assistant Vaccinators the services of 100 were utilised for vaccination work and that of the rest 20 were utilised for verification work as there was no separate sanction for the verifiers posts. The additional posts of 10 vaccination supervisors however remained unfilled at the end of the year. Besides the sanctioned strength of the Assistant Vaccinators, an available number of trained personel were entertained as Reserve Vaccinators in order to fill up short vacancies and thus a full daily working complement was maintained as far as possible.

Coverage.—A total of 30 divisions (6 in the 1st Circle, 10 in the 3rd Circle, 10 in the 2nd Circle and 4 in the 4th Circle) were covered during the year thus bringing the total coverage to 34 divisions from the commencement of the programme. A total of 10 Divisions (6 in the 4th Circle and 10 in the 5th Circle) remained for coverage at the end of the year.

Vaccine Material.—Lister Institute Freeze dried Vaccine was used from 5-5-1964 in the place of the Russian.

Health Education.—Sri A.G. Inbaraj, M.A., B.L. a post graduate in Social Sciences and Sociology was appointed as the Non-Medical Health Educator from 29-5-1964. After a preliminary orientation training at the Health Education Bureau, Government of Madras and at the Orientation Training Centre at the Research-cum-Action Project, Poonamallee, on the special aspects of Small-pox, he organised regular and systematic Health Educational activities during the various phases of work in each division. The activities included Advance Health Education to prepare the public to receive the programme spontaneously and concurrent Health Education at the time of Enumeration, Vaccination and Verification works. A Health Education Training Programme for the benefit of the field staff was gone through in a two day session on 5-11-64 and 6-11-64. The Director of Public Health, the Assistant Directors of Public Health, Health Education Bureau and Small-pox Eradication Programme and the staff of the Orientation Training Centre, Poonamallee associated themselves with the Training Programme and guided the sessions with pratical demonstrations in the field and discussion and solving of the problems encountered in the work.

The various methods and media employed for Health Education in each division of work were as:—

I. Mass Education.—

1. Street-war Loud Speaker announcements (The services of a trained Asst. Vaccinator Sri C. Suryamurthi were utilised for this purpose).

2. Display of wall posters.

3. Film projection.

4. House to House distribution of pamphlets, and the Divisional Councillor's appeal.

II. Group Education.—By lectures and distribution of literature. The following groups were contacted.

1. Local social sanghams.

2. School groups.

3. Health Educator and social workers of the Corporation Maternity and Child Welfare Centres.

4. Religious Institutions.

5. Occupational Institutions.

III. Individual Education.—By personal contact and talk, display of flash cards and supplying literature. The following persons were contacted:

1. Persons refusing or resisting Vaccination.

2. Leading and popular personalities of the locality.

3. Registered Medical Practitioners.

Special Work.—Under the intensive vaccinations programme from a directive from the Director of Public Health, Government of Madras, (Ref.—No. R. No. 79648-EPH/64-15 dated 31st July 1964) 6 Vaccinators and a Vaccination Supervisor from the N.S.E.P. (North) were diverted for vaccination of the Burma Repatriates that landed periodically at the Madras Harbour from 1-8-1964 to 31-12-1964.

Review Meetings and Inspections.—

1. Dr. K.M. Lal, Deputy Director General of Health Services, (Small-pox) Government of India, inspected and reviewed the work and addressed the field staff and the Medical Practitioners under the auspices of the Madras Branch of the Indian Medical Association.

2. A review meeting was held by the Chief Minister of Madras in his Chambers on 3-4-64.

3. Periodical review of work was done by the D.P.H., Government of Madras.

4. The A.D.P.H./S.E.P. inspected the field work on 20-1-64 and 8-10-64 in addition to periodical discussions.

5. A meeting was held by the Health Secretary, Government of Madras at which the work was reviewed and steps to accelerate the programme were discussed.

6. The A.D.P.H./H.E.B. participated in the advance Health Education Programme in the 26th Division.

Visitors.—Dr. Nicholson of the W.H.O. and a Non-Medical Health Educator from Ethiopia under the auspices of the W.H.O. were appraised of the work during their visits. The information service of the U.S.A. took photos of field work for publication.

NATIONAL SMALL-POX ERADICATION PROGRAMME (South District)

The National Small-Pox Eradication Programme sponsored by the Government of India and scheduled for a period of one year, was started on 2-10-1963 in the 100th division Corporation of Madras (South District). The attack phase continued upto September 1964 and this period was extended upto the end of March 1965, since the required target could not be reached within the stipulated time.

The inadequate of men and material during the part of 1963, slowed down the progress of work and the deficit complement was made up only in the beginning of 1964.

The administrative set up was the same as that of last year. The full complement of 60 vaccinators and 10 supervisors was reached only in the beginning of the year. One Health Educator was appointed in June 1964 as sanctioned by the Government.

An additional complement of 10 vaccination supervisors and 60 vaccinators was also sanctioned to expedite the attack phase more quickly. Thus a total strength of 120 vaccinators functioned from 22 December 1964. Out of these 120 vaccinators 10 well trained personals were deputed to work as verifiers, and the rest 110 as vaccinators. The additional post of 10 supervisors however remained vacant. Besides the sanctioned 120 vaccinators an appreciable number of trained personals were entertained as reserve vaccinators to work in casual vacancies, and to maintain a full daily working complement as far as possible.

Procedure of Work.—During the period of 2-10-1963 to 31-12-1963 only 4 divisions of 10th Circle (100, 99, 98 and 97) were covered, which was indeed slow on account of the dearth of men and materials, as already mentioned in the beginning of this report.

The Work in 1964 was started in 96th Division, Kamaraj Nagar, and continued division-wise in the descending order.

Use of Dried Small-Pox Vaccine.—From 2-10-1963 to 1-2-1964 dried small-pox vaccine from U.S.S.R. was used and it produced severe reaction, and consequent resistance from the public, subsequently from 1-2-1964 onwards dried vaccine manufactured in the Lister Institute, London was used, and it produced very good results. This supply continued upto the end of 1964.

Special features of the work.—The services of N.S.E.P. were readily available when there was a sudden out break of Small-pox in an epidemic form, in Vadapalani and Kodambakkam areas (91, 92 Divisions).

The Special officer changed the usual programme and diverted the entire staff to the infected areas 91 and 92 divisions where they worked for a period of 2 months, from February to March 1964. The N.S.E.P. staff with the co-operation of Circle Health Officer and the Divisional staff were able to control the spread of infection. The team then, moved on to 93rd Division T. Nagar on 2-3-1964 as per the original programme. During the year 1964 the team had covered 6 divisions of 10th Circle (i.e.) 91 to 96 divisions), the whole of 9th and 8th Circles and 59th Division of 6th Circle, thus making a total of 27 divisions.

The field staff of 60 vaccinators worked in a single batch till the fag end of the year 1964 and with the additional staff of 60 vaccinators, two divisions were taken up simultaneously from the 6th Circle and worked in two batches in two different field centres.

Health Education.—With the appointment of the Health Educator, the Health Education activities were intensified. Advance Health education and preparatory work for the next division was done by the special officer and the Health Educator in consultation with the Circle Health Officer. The divisional councillor and the local leaders were also contacted to influence and encourage the people for vaccination. Systematic Mass education by the propaganda van and by the loud speaker announcements, display of wall posters, film shows, by the public Health Bureau of the Office of the Director of Public Health, Madras, were done in all the streets. The printed appeals of the divisional Councillors were distributed to the public. Group education by lectures in all the public health institutions of the Corporation, display of flash cards in the schools and child welfare centres were made as a routine measure in every division by the N.S.E.P. staff.

Special works and activities.—The National Small-Pox Eradication week was observed from 25th September to 1st October 1964 by conducting processions led by the Special officer and followed by his staff in all the streets of Krishnampet area, Display of posters, distribution of leaflets, and loud speaker announcements were done during the procession.

Inspections by the officers of the Corporation and the public health department.—Periodical inspections were made by the Health Officer, Corporation of Madras, and the Assistant Directors of Public Health H.E.B. and S.E.P. The Deputy Director General of Health Services Government of India inspected the depot and addressed a meeting in Ashok Vihar. Lectures by the A.D. P.H. (H.E.B.) were delivered to the staff on Health Education and the method of approach with the public to achieve the object of successful implementation of the scheme. A conference was held in the Secretariat with the Chief Minister, Health Minister Secretary, Director of Public Health, Madras, Commissioner, Corporation of Madras, to study the progress of work. The Government was pleased to extend the time till March 1965. Further extension was also granted till September 1965 for an overall coverage.

Distinguished Visitors.—

1. Dr. William Nichol, Deputy Medical Officer of Health, Birmingham, visited the Kodambakkam depot and associated himself with the work done at the field centre and in the field.

2. Dr. Davis, Senior script writer, B.B.C., London, visited the field Centres at Thousandlights and Pudupakkam and tape recorded the health educational talks in English and Tamil.

The team had to face several ordeals such as resistance by the public against the use of dry vaccine owing to its severity in action non availability of the persons due to acute scarcity of rice, frequent epidemics of Dengue and Influenza fevers, and an outbreak of Cholera in Triplicane area are a few reasons for the low coverage. Particularly in Adyar, T. Nagar and Triplicane proper, where higher Educated class of people live, preferred their own private doctors for vaccinating them. The B.C.G. vaccination was in full swing in Arumbakkam and Sanar Palayam, 91st Division, where vaccinations for Small-pox could not be done. With all these obstacles the team was able to cover 68.4% of the enumerated population by actual vaccination and 75% including those found vaccinated successfully both P.V. & R.V. within a period of two years. The statement of vaccinations and verifications done in 1964 is herewith furnished.

Chicken-Pox

		<u>1964 as against 1963</u>	
Number of attacks during the year	..	3,098	9,677
Number of deaths during the year	..	11	3

Of late the disease of Chicken-pox is taking fairly severe form not only in 100 divisions but abroad also. A disease that is suppose to be near future, in recent year is pending complication, especially virus Pneumonia which is the usual cause of death especially in adult.

Measles

		<u>1964 as against 1963</u>	
Number of attacks during the year	..	768	1,887
Number of deaths during the year	..	12	16

Diphtheria

		<u>1964 as against 1963</u>	
Number of attacks during the year	..	90	351
Number of deaths during the year	..	35	31

2. Ingestion Diseases**i. Cholera**

		<u>1964 as against 1963</u>	
The incidence of Cholera during the year	..	2,163	330
Deaths due to Cholera during the year	..	130	21

The City of Madras is not endemic for Cholera, periodical epidemic came in depending upon the epidemic condition of hyperindium about over 4, 5 years. The previous epidemic or general infection occurred in 1953, 1957 and the City was completely free from Cholera during the year 1960 and 1961 and there was a sudden out break of Cholera during the middle of October 1962 in Kodambakkam. The probable of course of infection is from Andhra Pradesh. This was brought under complete control by about March 1963. Again stray cases of Cholera were reported from Chintadripet as well as in Government General Hospital in September 1963. The source of infection was traced from Velangani in Nagapattam. This epidemic continued on to the Middle of February 1964.

In September 1964, again Cholera broke out in an epidemic form especially in North Madras, (Royapuram and Washermanpet). Since at that time almost the whole State was infected the infection Madras should have been imported.

During the year 1964, 2,163 attacks and 130 deaths from Cholera were reported in the City of Madras with a case fatality rate of 6% which perhaps is the lowest ever recorded at Madras.

Number of attacks and deaths from Cholera registered during each month in the year 1964 is furnished below:—

Months		City		Mofussil	
		Attacks	Deaths	Attacks	Deaths
January 1964	..	34	1	41	2
February 1964	..	11	..	21	..
March 1964	..	..	..	..	..
April 1964	..	..	..	..	..
May 1964	..	..	..	..	..
June 1964	..	..	..	..	..
July 1964	..	..	..	..	..
August 1964	..	..	..	..	..
September 1964	..	10	3	..	..
October 1964	..	99	10	22	2
November 1964	..	1,657	85	96	8
December 1964	..	352	31	163	11
		2,163	130	343	23

The usual preventive measures consisting of disinfection of infected premises and areas, chlorination of water supplies, special attention to general sanitation and conservancy, house to house inspection in the infected areas, insolation of suspected cases inoculation of contacts and all those exposed of infection were promptly adopted. In all cases of imported infection intimation were sent to the Health Authorities concerned for information and necessary action.

As usual cases of Cholera from the adjoining districts of Chingleput were removed to the Infectious Diseases Hospital, Tondiarpet for isolation and treatment. During the year 1964, 343 cases were treated for Cholera of which 23 died. 1,18,537 inoculations against Cholera were done by Health staff during the year 1964.

ii. Typhoid

		1964 as against 1963	
Number of attacks during the year	..	729	1,329
Number of deaths during the year	..	58	95

729 attacks and 58 deaths from Enteric fever were recorded in the City against 1,329 attacks and 95 deaths during the previous year.

Necessary steps were promptly taken to check the spread of the disease in the City. The Sanitary Inspectors had taken prompt action in all cases notified and detected. Thorough disinfection of the infected houses and their surroundings, inoculation of contacts and the neighbours were carried out immediately. Birth and Death registration clerks were also instructed to notify deaths due to fever and bowel complaints and verify such attacks at the residences and prompt action was taken in such cases.

The Sanitary Inspectors contacted the Heads of Institutions, Schools, Colleges, Boarding and Lodging Houses, etc., and arranged for inoculations. The notification of cases by the private Medical practitioners continues to be poor. The Sanitary Inspectors were circularised to contact the Medical Practitioners to find out cases of Typhoid treated by them and to take prompt preventive measures in each and every case. The Cleansing Department have taken action to keep the areas clean and tidy. The Senior Entomologist, National Malaria Eradication Programme was instructed to intensify the deflying measures in all the infected localities and Markets. The wells in the infected areas were chlorinated regularly. Distribution mains of water supply in the infected areas have been chlorinated intensively by extra chlorine injections. The Sanitary Inspectors had taken steps to seize and destroy unwholesome food stuffs, ice cream and fruits exposed to dust and flies in their division especially near schools and markets by conducting special raids.

The Health propaganda officers conducted lectures and exhibition of slides in the infected areas and their surroundings explaining to the public about the prevalence of the infection and communicable diseases and the paramount need to take preventive measures to check the spread of the disease. 6,758 inoculations against Typhoid were done by Health staff during 1964. These figure of notified cases do not give any correct position of Typhoid in the City. No notified is due by private practitioners inspite of requests. Even the state hospitals do not notify cases of Typhoid regularly. Unless the Co-operation is given, it is not possible to control the diseases.

iii. Dysentery

No. of attacks during the year 1963 ...	Not reported.
No. of attacks during the year 1964 ..	Not reported.
No. of deaths during the year 1963 ..	2,217.
No. of deaths during the year 1964 ..	2,011.

3. ARBOR DISEASES

I. Malaria

The National Malaria Eradication Programme is an All India Programme aimed at the eradication of malaria from the Country. It covers the entire country and is carried out as per the pattern laid down by the Centre. The Corporation of Madras has been participating in the above National Scheme from its inception.

The species of Anopheles mosquito by name Anopheles stephensi is the vector of Malaria in Madras City. This Anopheles mosquito breeds in contained clear water collections like wells, cisterns, overhead tanks, etc., in the City. The main plank of control in the City is the destruction of the larval and pupal stages of Anopheles in the above cited types of water collections.

NATIONAL MALARIA ERADICATION PROGRAMME



All fever cases in slums are given treatment
with 4 aminoquinoline tablets.

The Surveillance wing of the National Malaria Eradication Programme is also under effective implementation from the year 1960. The Surveillance Staff detect all fever cases and treat them with 4-aminoquinole tablets after taking blood smears. The blood smears are examined for Malaria Parasites and positive cases found are radically treated with 8-aminoquinolines.

Staff.—During the year 1964, Sri V. Sivasubramania Pillai, Senior Entomologist continued to be directly in-charge of the National Malaria Eradication Programme Scheme in the City.

The following are the staff sanctioned for the National Malaria Eradication Programme under the Corporation of Madras:—

Senior Entomologist	..	1
Entomological Assistant	..	1
Malaria Supervisors	..	6
Upper Division Clerk	..	1
Typist	..	1
Laboratory Technicians	..	3
Asst. Malaria Supervisors	..	8
Attenders	..	27
Mechanic	..	1
Peon	..	1
Watchman	..	1
Drivers	..	2
Cleaner	..	1
Thozhilalies	..	105

Evaluation of the Programme.—The progress of the programme is evaluated from the morbidity statistics of malaria collected from the hospitals and dispensaries, by the number of Malaria cases detected under Active and Passive Surveillance and by investigations on the effectiveness of the larvicidal operations.

Morbidity Statistics.—The number of cases clinically diagnosed as Malaria continued to show decline year after year. During the year under review not even a single case of malaria has been recorded in the different dispensaries of the Corporation of Madras or detected under Surveillance.

During the year 1955, the percentage of Malaria cases clinically diagnosed as malaria was 0.362% and this has shown a steady decline to 'NIL' percentage during 1964. The number of cases clinically diagnosed as Malaria during 1955 was 5,050 as against 'NIL' during 1964. This graphically illustrates the very good progress maintained towards eradication of Malaria in the City.

The following table gives the number of Malaria cases with percentages treated in the various Corporation dispensaries.

Year	No. of hospitals and dispensaries	Total out-patients in hospitals and dispensaries	Malaria cases	Percentage of Malaria cases treated to total cases of out-patients treated
1955	40	13,96,381	5,050	0.362
1956	40	16,36,269	2,650	0.16
1957	43	16,75,037	2,821	0.16
1958	45	13,27,883	2,701	0.2
1959	50	15,54,187	1,077	0.06
1960	50	14,65,330	129	0.009
1961	50	17,96,163	139	0.0008
1962	50	32,91,211	24	0.0007
1963	50	36,97,701	4	0.0001
1964	50	..	..	..

The percentage of Malaria cases treated in the six dispensaries situated in the endemic areas of City are furnished below :

Dispensaries in endemic areas	Malaria Morbidity Rates									
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Mofuskhan..	0.01	0.001	0.001	0.00	0.002	0.01	0.03	0.00	0.01	0.00
Mannady ..	2.40	2.2	0.001	0.07	0.032	0.00	0.00	0.00	0.00	0.00
Mint ..	0.55	0.3	0.01	0.07	0.007	0.00	0.00	0.00	0.00	0.00
Muthialpet	0.005	0.48	0.00	0.00	0.000	0.00	0.00	0.02	0.00	0.00
Seven Wells.	0.00	0.57	0.32	0.08	0.06	0.002	0.00	0.00	0.00	0.000
Trevelyn Basin ..	—	0.45	0.18	0.03	0.002	0.000	0.00	0.00	0.00	0.00
Average ..	0.51	0.35	0.09	0.004	0.047	0.005	0.0005	0.0002	0.0001	0.00

NATIONAL MALARIA ERADICATION PROGRAMME



A surveillance worker is seen taking a blood smear
in a slum from fever case.

Graph I gives the annual morbidity rate for Malaria from all the dispensaries under the Corporation from the year 1955.

Surveillance.—The Surveillance wing of the National Malaria Eradication Programme consists of two aspects: (1) Active and (2) Passive Surveillance. Active Surveillance is the detection and treatment of all fever cases directly by the Surveillance Organisation in the areas allotted. Passive Surveillance envisages the detection and treatment of cases of Malaria from among the fever cases that attend the dispensaries and hospitals.

Active Surveillance.—Active Surveillance is carried out by the Surveillance Staff of the National Malaria Eradication Programme which consisted of 25 Surveillance Inspectors and 100 Surveillance Field Workers. Each Surveillance Inspector is in-charge of one Sub-Circle having 4 Surveillance Field Workers under him.

In view of the fact that the results achieved towards eradication of the disease is very good, and it was decided during the end of 1964, that Active Surveillance could be confined to the endemic areas in North Madras and slums only, and concentration on Passive Surveillance made in the dispensaries. Accordingly from 1-12-1964, the Active Surveillance was confined to 5 Sub-Circles (i.e. 20 Surveillance Field Workers and 4 Surveillance Inspectors) in George Town and areas in North George town and 12 Surveillance Field Workers to cover the slums in the other areas. One Surveillance Field Worker was posted to each of the 45 dispensaries both in the fore-noon and after-noon to take blood smears from all the fever cases. 20,956 fever cases were detected under Active Surveillance during 1964 and all of them were negative for malaria parasites.

The following table furnishes the particulars of the active surveillance for each month with species of parasites:

Month	No. of fever cases detected	No. of blood smears taken	No. Positive for malaria			Per-cent	No. of cases treated with 4-aminoquinolines
			v.	f.	mixed		
January	.. 1,356	1,341	..	..	..	..	657
February	.. 1,331	1,323	..	..	..	..	667
March	.. 1,744	1,734	..	..	..	..	836
April	.. 3,113	3,106	..	..	..	..	871
May	.. 1,994	1,989	..	..	..	..	736
June	.. 1,902	1,898	..	..	..	..	661
July	.. 2,009	1,996	..	..	..	..	845
August	.. 1,845	1,829	..	..	..	..	701
September	.. 2,391	2,368	..	..	..	..	1,402
October	.. 1,552	1,526	..	..	..	..	745
November	.. 932	916	..	..	..	..	303
December	.. 787	783	..	..	..	..	479
Total	.. 20,956	20,809	..	..	..	..	8,903

Graph II gives the total number of blood smears collected under Active and Passive Surveillance month-wise.

Graph III gives the Malaria cases detected under Active and Passive Surveillance from 1960 to 1964:

Passive Surveillance.—All the dispensaries of the Corporation of Madras that lie within Surveillance zone of the Corporation were posted with one Surveillance Field Worker each, who took blood smears from all the fever cases that attended the dispensaries. A total of 70,900 blood smears were collected during the year and all of them were found to be negative to malaria parasite.

The following table gives the particulars:

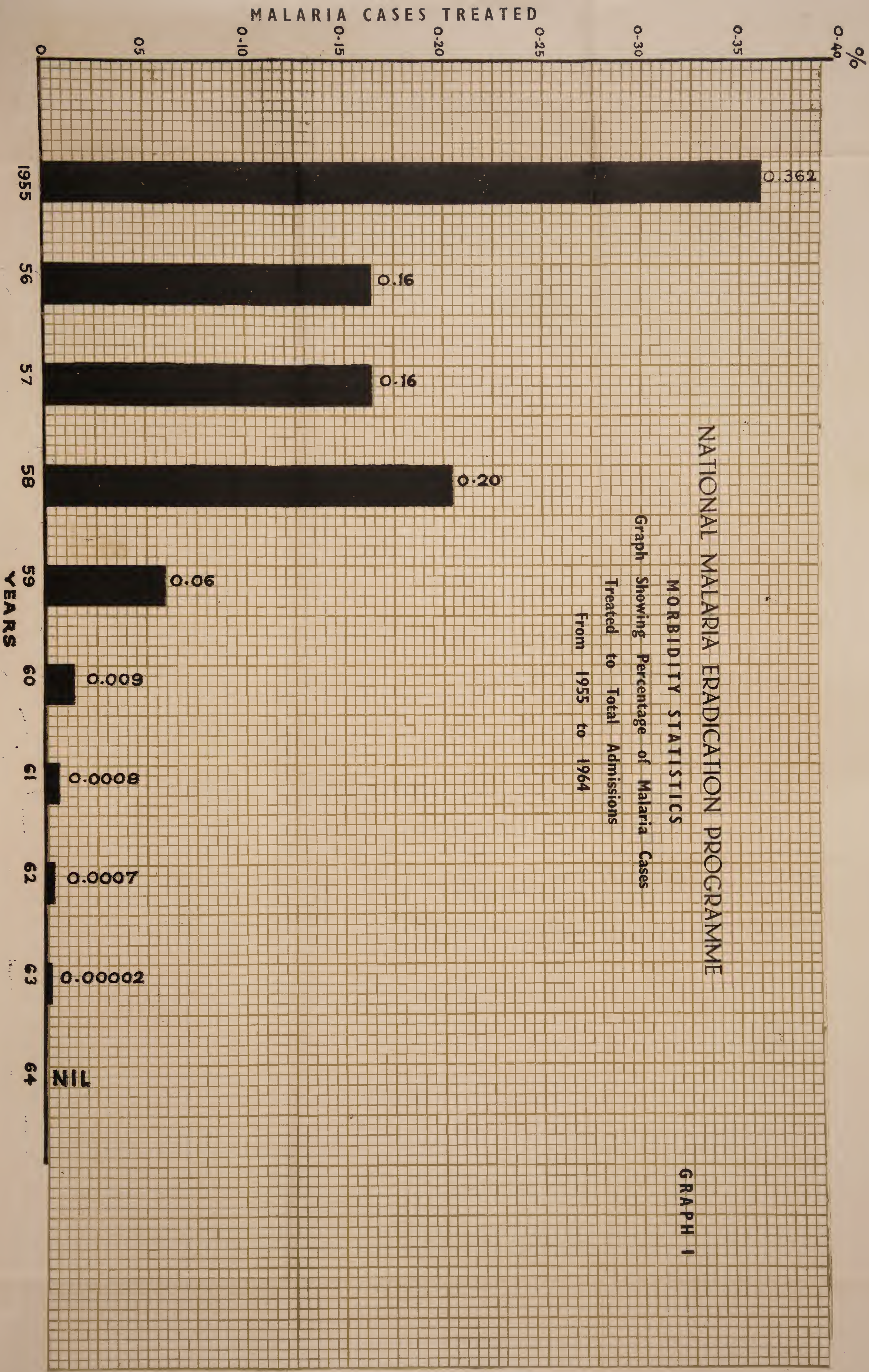
BLOOD SMEARS FROM DISPENSARIES

(Passive Surveillance)

Month		Number of blood smears received	Number of positive	Percent	Species			Remarks
					v.	f.	mixed	
January	..	6,346	..	..	..	..	..	..
February	..	5,472	..	..	..	..	..	..
March	..	4,789	..	..	..	..	..	..
April	..	3,449	..	..	..	..	..	..
May	..	3,206	..	..	..	..	..	..
June	..	2,903	..	..	..	..	..	..
July	..	5,861	..	..	..	..	..	..
August	..	8,614	..	..	..	..	..	..
September	..	11,455	..	..	..	..	..	..
October	..	5,442	..	..	..	..	..	..
November	..	3,072	..	..	..	..	..	..
December	..	9,691	..	..	..	..	..	..
Total	..	70,900	..	..	..	..	..	..

Entomological Survey.—Collections for mosquitoes from fixed stations spread throughout the City as well as random collections were made during the year. The following species of *Anopheles* were recorded.

- (i) *A. stephensi*
- (ii) *A. subpictus*
- (iii) *A. vagus*



2000 1900 1800 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 300 200 100 0

Area

2 MIF

1000000

500000

100000

50000

10000

5000

1000

500

0

BLOOD SMEARS COLLECTED

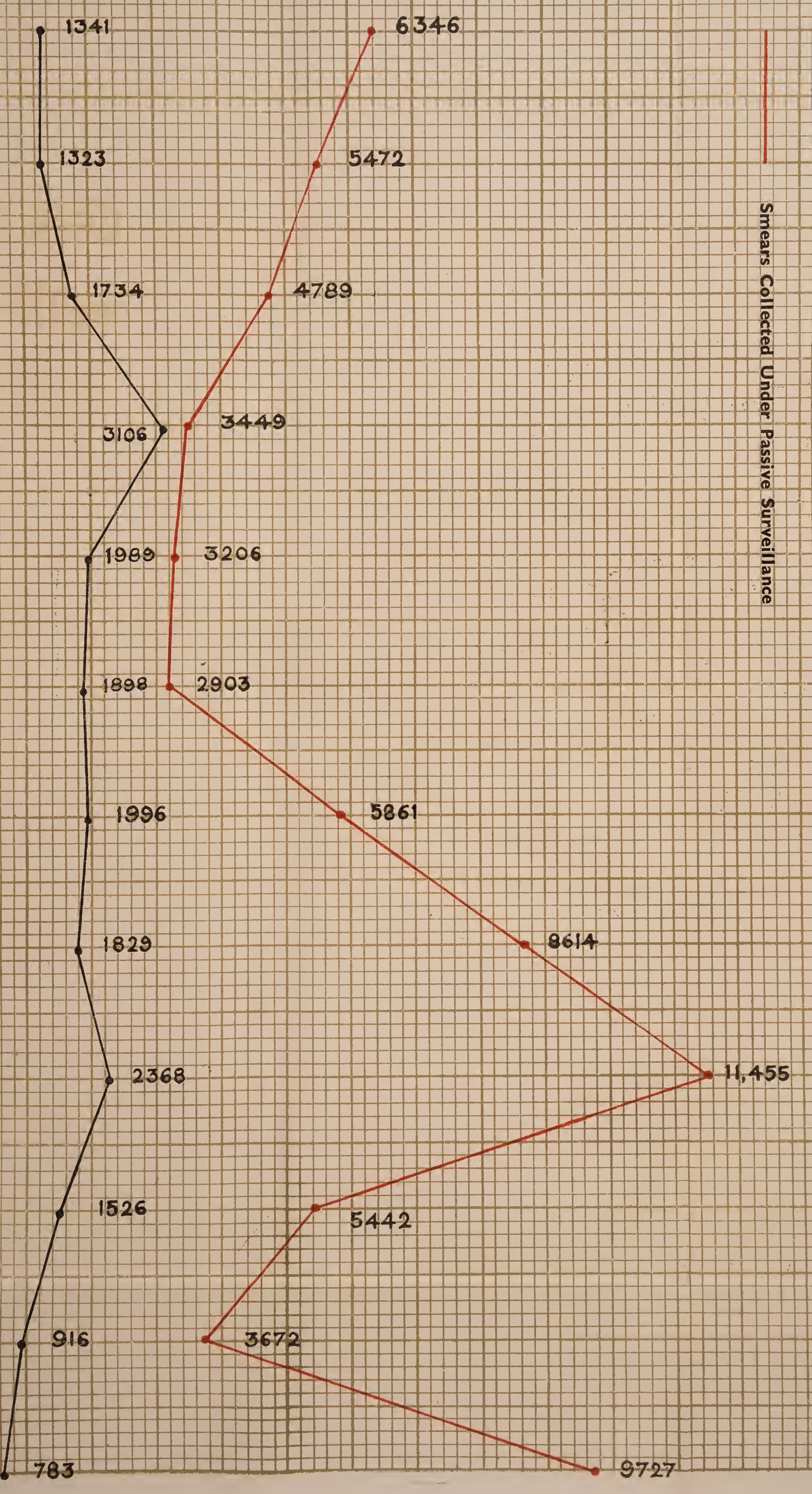
NATIONAL MALARIA ERADICATION PROGRAMME
Graph Showing The Total Blood Smears Collected Under Active & Passive Surveillance
Month War For 1964

INDEX

Smears Collected Under Active Surveillance

Smears Collected Under Passive Surveillance

JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTHS



NATIONAL MALARIA ERADICATION PROGRAMME

GRAPH III

Malaria Cases Detected

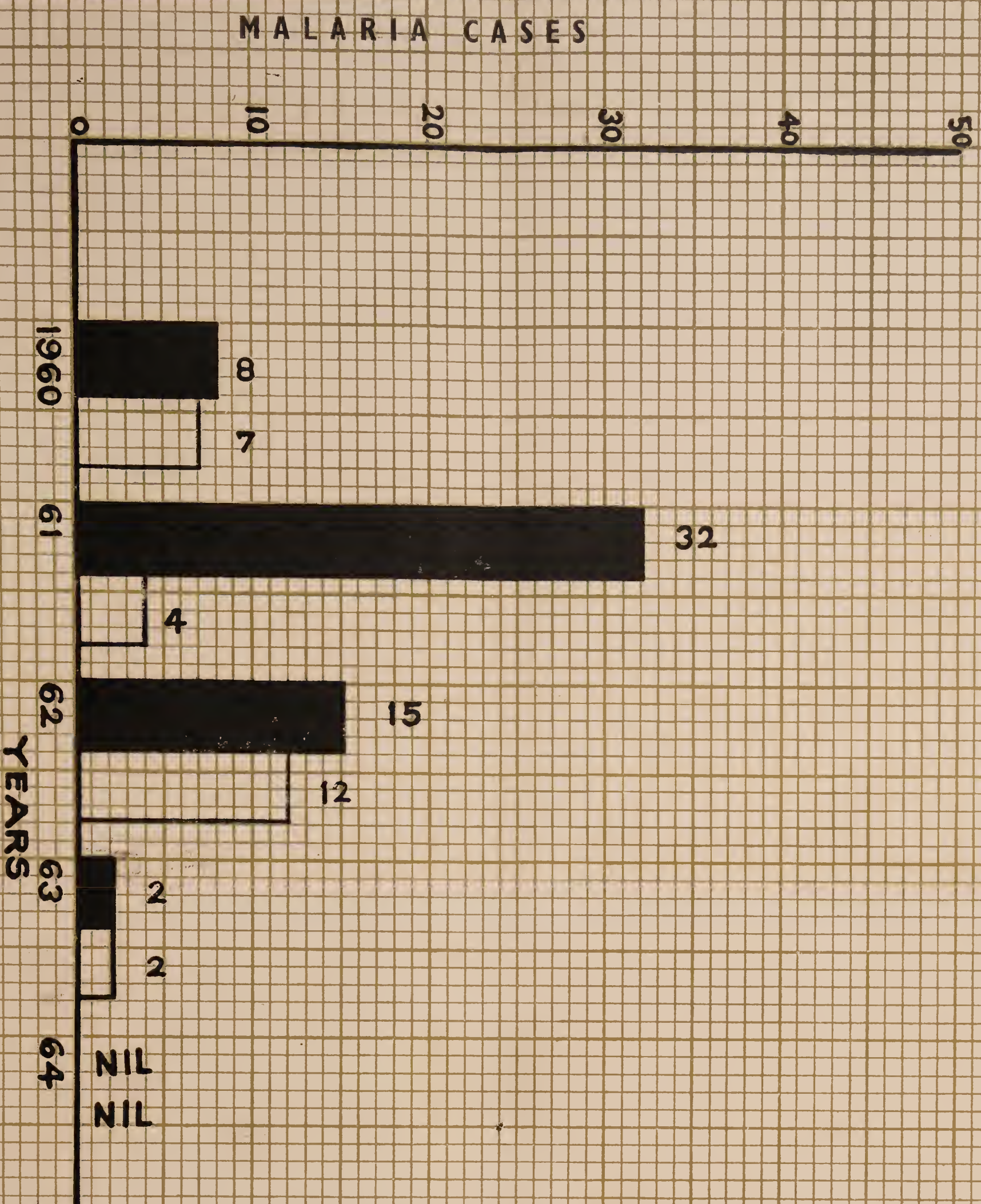
Under Active & Passive Surveillance

From 1960 to 1964

INDEX

■ Detected Under Active Surveillance

□ Detected Under Passive Surveillance



The density of all *Anopheles* and *Anopheles stephensi* which is the carrier species per-man-hour are furnished below:

Month	Time spent		No. of Anopheles collected	Per-man- hour for Anopheles	No. of A. stephensi	Per-man- hour for A. stephensi	
	Hrs.	Min.					
January	..	77	..	353	4.585	..	..
February	..	94	..	569	6.053	..	..
March	..	96	..	598	6.229	..	..
April	..	84	..	306	3.643	1	0.12
May	..	70	..	211	3.001	..	..
June	..	48	..	150	3.125	..	..
July	..	92	45	208	2.242	..	..
August	..	86	45	166	1.913	1	0.011
September	..	81	..	48	0.592	..	..
October	..	88	..	71	0.806	..	..
November	..	88	..	71	0.806	..	..
December	..	87	30	44	0.502	..	..

The density of *Anopheles* has been very low. *A. stephensi* were collected during the year in two places.

Graph IV gives the per-man-hour of vectors and non-vectors month-war for 1964.

Anti-larval measures.—The wells, cisterns, overhead tanks, ornamental tanks and other clear water collections are the breeding places for *A. stephensi* in the City. All these contained water collections were kept fully under

control during the year. The wells are classified as 'used' and 'unused'. The used wells were stocked with gambusia affinis and the unused wells treated with aromex emulsion once a week. During the year 1964, all the used wells were systematically stocked with gambusia fish and all the unused wells treated with larvicides. The quantity of aromex spent and wells covered during year are furnished below:

1. Total quantity of Aromex spent during 1964 .. 10,000 litres.

2. Average No. of wells covered every week with Aromex .. 2,622

3. No. of wells stocked with gambusia fish .. 36,031

Cost.—A total sum of Rs. 1,76,651-44 P. was spent during the year under the National Malaria Eradication Programme. The details are furnished below:

Expenditure details :

Pay of Establishment including officers .. Rs. 78,942-25

Pay of Labour charges .. Rs. 85,895-13

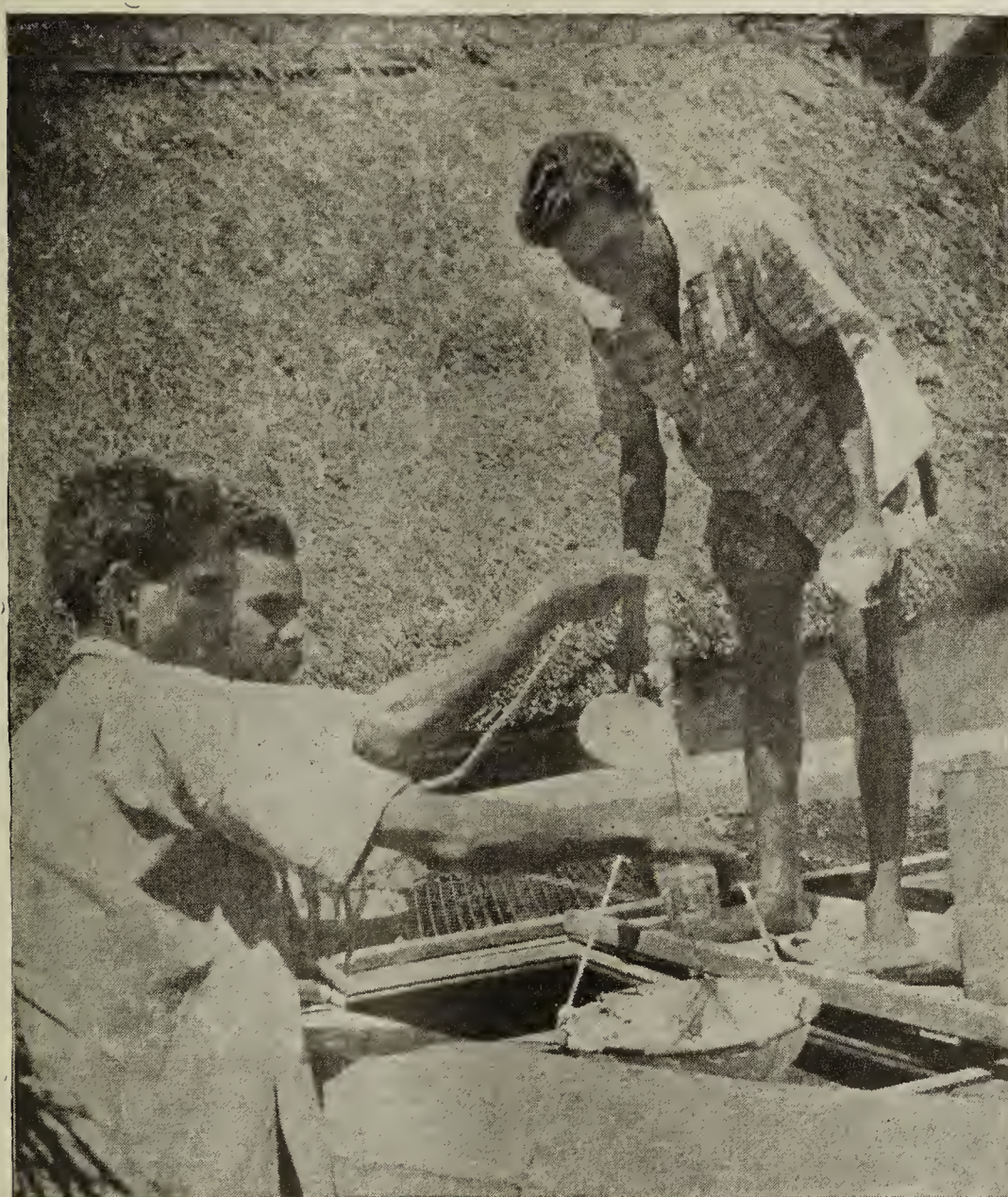
Other contingencies .. Rs. 11,814-06

Total .. Rs. 1,76,651-44

Motor transport:—Two Dodge Power Wagons supplied in the year 1955 under the Indo-American Aid continued to serve the National Malaria Eradication Programme, during the year under review. The particulars of the expenditure of Petrol, Oil and lubricants along with the number of miles run are furnished below:

	M.S.Y.—1399	M.S.Y.—1407
Type of vehicle ..	Dodge Power Wagon	Dodge Power Wagon
Date of supply ..	5-3-1955	5-3-1955
No. of miles run during the year ..	4,655 Miles	8,557 Miles
Cost of fuel and oil ..	Rs. 1,589-25	Rs. 3,177-75
Expenditure incurred on other items of maintenance such as servicing, repairs, replacements of tyres and tubes purchase of spare parts, etc. ..	Rs. 2,061-07	

THE NATIONAL MALARIA ERADICATION PROGRAMME



The anti-larval measures are aimed at the control of the breeding of *A. stephensi* mosquitoes in wells.

PER - MAN - HOUR
NO. OF ANOPHELES MOSQUITO

0 1 2 3 4 5 6 7

NATIONAL MALARIA ERADICATION PROGRAMME

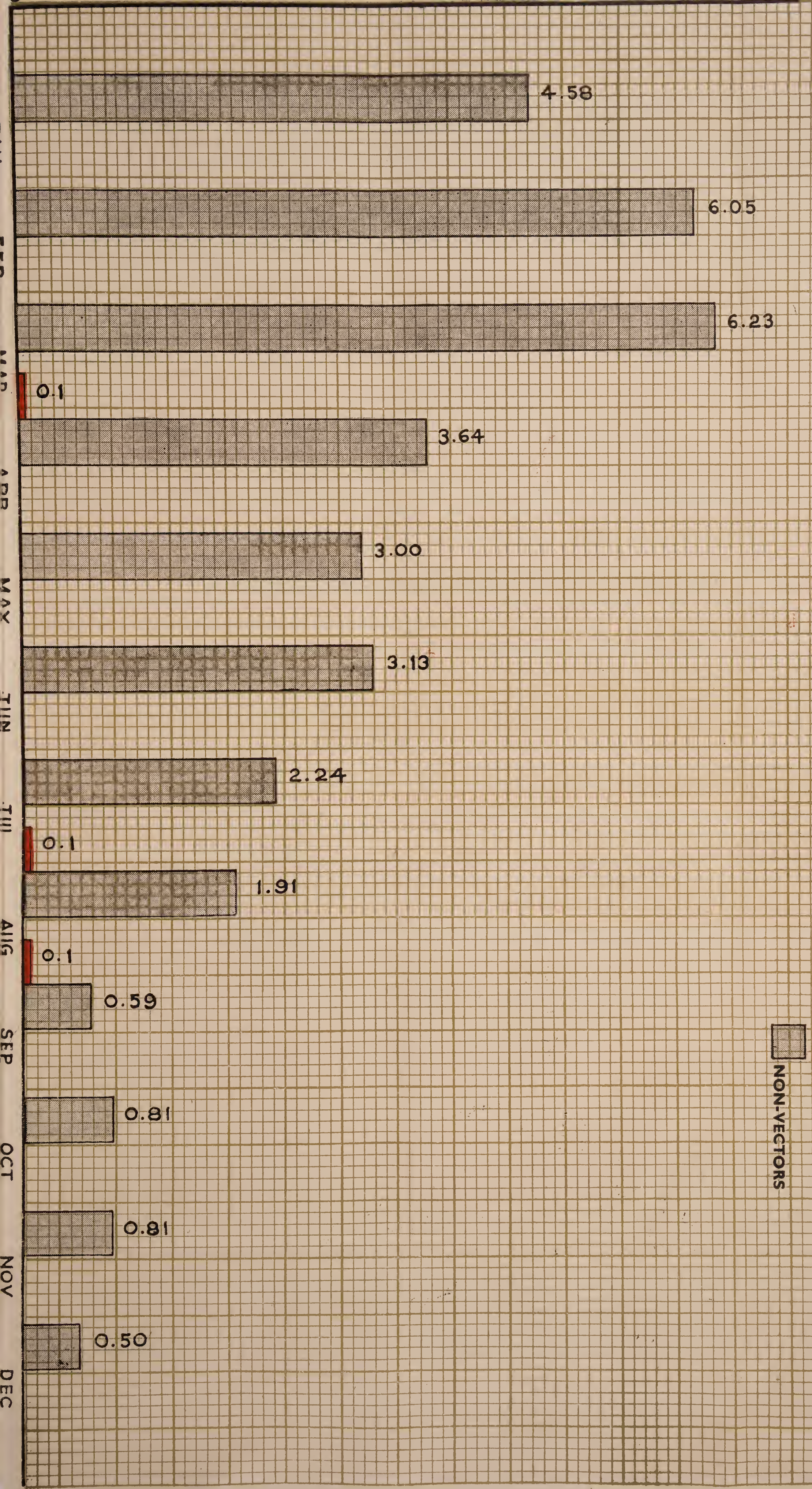
Graph Showing The Per Man Hour of Vectors & Non-Vectors

MONTH WAR FOR 1964

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VECTORS

NON-VECTORS



GRAPH IV

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
<i>Equipments:</i>										
Trucks	..	2	..	..	..	..	..	..	..	..
Power Sprayers	..	1	..	..	..	..	..	..	..	..
Hand compression sprayers	..	12	..	..	..	..	..	..	..	..
Stirrup Pumps	..	30	..	21	..	..	..	..	..	..
<i>Drugs:</i>										
Resochin	..	740	..	..	..	..	..	..	..	..
Nivaquine	..	1,000	..	..	..	13,000	14,000	..	..	..
Avlochlore	10,000	..	..	..	..	..	..	..
Chloroquine	21,500	30,000	2,000	..	..
Amodiaquine	40,000	49,000	35,000	..
Primaquine	3,000	50,000	..	..	..
Aralen	30,000	25,000	..
<i>Insecticides:</i>										
DDT 75% wettable	..	1,39,000	75,422	30,099	20,500	..	..	..	..	..
Dieldrin 50% wettable	..	600	1,000	400	..	..	..	..	..	..

Issues of the terms received as above are shown below :

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
<i>Drugs:</i>										
Resochin	..	740	..	..	..	..	..	..	..	..
Nivaquine	793	207	..	..	13,000	14,000	..	..	..	..
Avlochlor	..	..	925	806	759	7,200	..	..	..	..
Chloroquine	..	..	..	..	..	21,500	30,000	1,000	..	..
Amodiaquine	..	..	..	..	..	..	36,000	49,000	35,000	..
Primaquine	..	..	..	..	..	135	1,058	2,000	..	..
Aralen	..	..	..	..	..	..	..	21,000	31,000	..

Other activities.—Laboratory studies were regularly carried out to find out the mortality rate of mosquitoes caught from different parts of the City, and the effectiveness of different insecticides.

Conclusion.—The N.M.E.P., was carried out in an intensive scale during the year as per pattern laid down in the All India Programme. The entire population of City was afforded protective by covering all the breeding places under Anti-larval measures. The passive surveillance was very much enlarged. Not even a single case of Malaria was recorded during the year 1964. By a continuation of Anti-larval measures and active and passive surveillance, a long step has been taken towards achieving complete eradication of Malaria.

GENERAL MALARIA - (ANTI-MOSQUITO MEASURES)



The anti-mosquito measures are designed to control the breeding of culicine mosquitoes in the drains, cesspools rivers etc.

II. ANTI-MOSQUITO AND ANTI-FLY MEASURES

The General Malaria Section of the Health Department carried out the Anti-mosquito and Anti-fly measures in the City.

The Senior Entomologist who was placed directly incharge of General Malaria Section in addition to his duties of implementing the National Malaria Eradication Programme from 1962, was in-charge of the same upto 30-6-1964. From 1-7-1964, the General Malaria Section was decentralised and placed under the administrative control of the 2 Assistant Commissioners, North and South and the Circle Health Officers of each Circle was directly in-charge of the General Malaria Section.

The Strength of Staff sanctioned for the year 1964 are furnished below:

Entomological Assistant	..	1	(To be appointed)
Malaria Supervisors	..	10	
Store-Keeper	..	1	
Laboratory Attender	..	1	
Maistries	..	118	
Thozhilalies	..	693	

Apart from the above, 8 Stegomia Overseers and 8 thozhilalies continued to work during the year for the control of Stegomia (Aedes) in and around the Harbour as required under the International Sanitary Conventions.

Anti-mosquito measures.—The anti-mosquito measures aimed at the control of the breedings, mainly of culicine mosquitoes, were intensively carried out during the year. Culicine mosquitoes are not only responsible for the transmission of Filariasis, but they are responsible for 'mosquito nuisance' in many parts of the City.

The City covers an area of about 50 square miles and a large number and variety of water collections were available for breeding of mosquitoes throughout the City. The normal breeding places in the City were the Storm Water Drains, cutcha drains, rain water stagnations, the Rivers Cooum and Adyar, Buckingham Canal, cesspools in the slums and unsewered areas, the larger drains like Anti-malaria drain, Ottery Nullah, Sun Theatre Nullah, Railway Channel, etc. Breeding places within the premises of private buildings and offices also constituted a problem. All the drains were weekly cleaned and applied with larvicides regularly. The cesspools and other water stagnations were removed of their floating matters and applied with larvicide to kill the aquatic stages of mosquitoes. All the tanks and ponds in the City were regularly cleaned and kept free from Algae and moss, and breedings in them controlled.

Wells, cisterns, overhead tanks and similar clear water collections which breed the malaria carrier *A. stephensi* were regularly attended to and kept free of breeding by the staff under the National Malaria Eradication Programme.

Whenever complaints of mosquito nuisance were received these were investigated immediately and the breeding if any noticed within the houses destroyed.

Anti-Fly Measures.—Intensive anti-fly measures were carried out during the year under review. During the season when the fly density was on the increase all the markets were regularly sprayed during nights. Sprayings were carried out in the dumping grounds and garbage heaps also. Street by street control of flies were also carried out. These intensive measures kept the density of flies at the very minimum.

III. Filariasis

Madras City with all its sides surrounded by Filarial endemic areas and with the influx of population from the highly endemic areas of Tanjore, South Arcot, and Chingleput Districts is slowly becoming more and more endemic for Filaria. In order to assess the quantum of Filaria endemicity present and to draw up a scheme of control, Pilot Filaria Control Projects were commenced in some of the divisions in the City. Blood Smears were taken during the nights. The surveys had to be conducted between 9 P.M. to 1.00 A.M. in the night, and co-operation of the Public was not fully available for this work because the people had to be woken up from their sleep during nights. Each and every person had to be convinced before they allowed their blood to be taken. Night blood smears thus taken were examined at the Malaria Laboratory at Elephant Gate and the cases found positive for microfilaria were given free treatment at the nearest Corporation Dispensary with Hetrazan or Banocide tablets.

The following statement shows the endemicity of Filariasis present in the different divisions already surveyed. The survey showed that filariasis is getting entrenched in the City. The survey continues:

Dn. No.	Name of division	No. of blood smears collected	No. of blood smears examined	Number of positive	Micro-filaria rate	Disease rate	Endemi-city rate
23	Korukupet	.. 8,116	8,116	1,258	15.5	0.92	16.42
90	Adyar	.. 8,703	8,703	897	10.3	0.45	10.75
26	Peddunaickenpet	4,263	4,263	283	6.6	0.26	6.86
29	Elephant Gate	.. 1,564	1,564	58	3.7	0.11	3.81
88	Alwarpet	.. 6,323	6,323	1,006	14.3	1.01	15.3
100	Saidapet (South)	.. 6,309	6,309	1,124	17.8	2.00	19.8
98	Periapet	.. 4,269	4,269	676	15.8	1.02	16.8
97	Saidapet (North)	.. 7,245	7,245	1,431	19.7	2.01	21.7

The following staff were sanctioned on requisition basis to carry out the surveys and treatment:

Clerk-cum-Typist	..	1
Clerical Attenders	..	2
Lady Workers (A.Vs.)	..	8
Maistries	..	18
Thozhilalies	..	12
Driver	..	1
Cleaner	..	1

In the light of the data collected during the survey, control measures to combat the further spread of Filaria in the City will be instituted.

IV. Dengue-Like-Fever (Epidemic)

Madras City has experienced a very severe Epidemic of a fever with Dengue like symptoms, during the months of August to November 1964. It was quite possible that there might have been cases even before August but no morbidity data were available with the Health Department of the Corporation. As far as the cases that were admitted to Infectious Diseases Hospital, Madras, are concerned, the first case recognized on August 19th and clinically diagnosed as a case of Dengue, was a male adult with history of fever with rigor, head ache, back ache, severe body pains, pains in the joints with a maculo-popular rash of no specific type of distribution all over the body but without any catarrhal symptoms. In the three months following, about 4,200 cases with such symptomology were admitted and treated as out patients, in this Hospital alone. Most of the cases that were admitted to the Infectious Diseases Hospital were from the neighbouring localities, and institutions like Hostels, Orphanages, Juvenile homes, etc. Several thousands were treated at other Hospitals and by the private practitioners for which no statistical data were available.

For want of Laboratory facilities, and adequate staff, the diagnosis was purely made on the clinical findings and history of multiple cases with a similar symptomatology in the same family. Only in 37 cases, paired samples of blood were taken for serological diagnosis and these were studied at the Virus Research Centre, Poona.

The Mortality was very low with a case Fatality Rate 0.426%. It is slightly higher in females (0.451 %) than in males (0.408 %). With reference to age, the case fatality rate seems to be the highest in the extremes of life with 2.8% in infants under one year and 1.6% in the old beyond 50 years.

The epidemic was explosive starting in the middle of August reaching its peak in the latter half of September and subsiding by middle of November.

There was slight increased incidence in males in general and about 50% of the cases have occurred in children under 14 years.

Head ache, Back ache, body pains and joint pains were the most common clinical features occurring in about 90 to 100% of the cases. Vomiting and cough were present in about 50 to 60% of cases. Haemorrhagic complications occurred only in 5 to 7% of the cases. A maculo popular rash was present at one stage or other during the course of the disease in half the number of cases. The fever was of short duration usually lasting for about 3 to 4 days. 6% of the cases had relapses.

Serological study were done only in 37 cases and that showed 67% of them had frank conversion to Chickungunya virus.

More laboratory investigations should have been done to find out the actual conversion rate to the Chickengunya and Dengue Virus but unfortunately we have been taken up unawares and due to rush of cases, and want of staff and want of laboratory facilities more scientific study could not have been done in diagnosing cases.

4. ZOONOSES

Antirabic Measures

Introduction.—Stray dogs in the City not only cause nuisance but also become a danger to the public health if they become mad. They breed very fast due to conditions in the City and due to hospitable feelings of the public towards dogs. The most horrible and mortal disease Rabies (“Hydrophobia”) is transmitted to human beings mainly by rabid dogs if they either bite or snap human beings. Sickly mangy dogs roaming freely and causing nuisance in the public roads and places resorted by public are not only unhygienic but becomes dangerous and risky for the movement of the public. Many a traffic accident involving human lives are caused by stray dogs on the busy roads. Further, stray dogs crossing in the public forms very unhealthy impressions in the minds of children. To control the nuisance and risks to public health caused by the stray dogs Corporation of Madras is maintaining the Lethal Chamber under the Control of the Health Officer.

Particulars of work during the year 1964

S. No.	Particulars	No. of dogs	No. of Bitches
1	No. of dogs left over on the last day of December 1963 ..	20	37
2	No. of dogs admitted during the year 1964 ..	16,869	17,624
3	Total No. of dogs ..	16,889	17,661
4	No. of dogs electrocuted during the year 1964 ..	14,262	16,591
5	No. of dogs released to the owners on payment ..	1,850	740
6	No. of dogs given to the Medical colleges for experimental purposes ..	636	146
7	No. of dogs put in public auction 1964..	..	..
8	Balance of dogs remaining in the chamber on 30-12-1964 ..	141	184

Object.—Dog is the most desired animal amongst the domestic pets because of its fidelity and loyalty to its owners. Some people keep dogs for fancy and others keep them for watching the house. They become a source of danger if they become rabid. Rabies, the most horrible disease that men shudders to suffer is transmitted by rabid dogs, if they bite or snap human beings. They become a nuisance if they are allowed to stray and freed uncared for.

Hence the Corporation of Madras is maintaining Lethal Chamber to prevent the spread of rabies and to control nuisance due to the stray dogs.

Institution and its working.—In the Lethal Chamber there is ‘Dog Home’ and electricution station. All the ownerless dogs found straying in any street or places frequented by public like markets, slaughter houses, cart stands, Choultries, Public offices, Hospitals, etc., are seized by expert dog catchers by noosing and they are bought to the Dogs Home by the motor vans specially provided for the purpose. They are detained for 3 days (72 Hours) in well maintained Dogs Home, fed and cared for. These dogs are being released on payment of licence fee of Rs. 1-25 and the detention charges at Rs. 0-25 per day by their owners. The unclaimed dogs are electrocuted and buried on the fourth day. The dog catchers are paid Rs. 0-19 for every dog caught as reward. There are two vans provided for rounding up the stray or rabid dogs in the 100 divisions of the City of Madras.

The dogs are caught with minimum force without clubbing, beating and dragging in the public which will raise sentimental objection from dog loving public.

The killing of dogs is done by electrocution which is most modern, painless, instantaneous and sanitary method known. Care is also being taken to see that no dog sees while its companion is being killed which cause mental agony to the sentive animals.

Educational Visits.—Control of Rabies being an acadamil subject, the students from the following institutions visited this institutions to whom the salient features and working were explained in detail. Demonstration of noosing and electrocution were conducted for the benefit of these visitors.

1. Medical interness of Stanley Medical College, Madras.
2. „ Madras Medical College, Madras.
3. „ Christian Medical College, Vellore.
4. Students undergoing training in Health Visitors Course.
5. „ in Sanitary Inspector Course.
6. Medical interness of Government Medical College, Pondichery.
7. Students undergoing in P.H. Course.

Research scholars from the Madras Veterinary College came to collect organs and parts of carcasses for research purposed. Live dogs are given to Medical and Veterinary Colleges in the City for experimental purposes. Apart from this the Thoracic Surgical Department of Christian Medical College, Vellore are supplied with live dogs for experimental purposes.

Conclusion.—Apart from the work done in the City limits our dog catchers are deputed to help the Thiruvethiyur Municipality, Villivakkam Town Panchayat, T.B. Sanitorium and Meenambakkam Aerodrome for catching stray dogs and they were brought to this institution for electrocution on payment of Rs. 0-25 per dog.

FOOD SANITATION

i. Food Establishment Sanitation:

The following statement gives an idea of the number of the food establishments for which licence applications have been received and they were disposed, etc. This number has been growing enormously year after year. The sanitation of these houses have been far from satisfaction. Several small establishments have been cropping up which do not possess even the fundamental sanitary prerequisites for licencing and these are adding to our problems of food infections. Though there is specific rule that no trade shall be started unless the applicant is in possession of a valid licence, yet it is scarcely followed. The prosecution of such cases are being dealt with very leniently. Better and more strict control and supervision over these eating establishments is urgently needed. Further the food handlers should have a more thorough medical check up before they are entertained and repeatedly every year at least and every handler should be in the possession of a certificate from the Health Officer always while on duty with his photograph. The By laws governing these establishments are so old that they require immediate revision and the department is seized with this question seriously and something will be done to improve the hotel sanitation very soon.

ii. Food Adulteration:

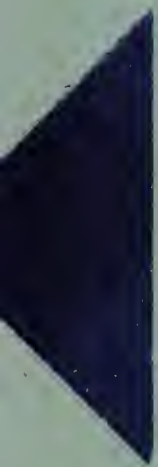
It is a known fact that the Food Adulteration is not only a social evil but it is a Public Health hazard, since the adulterated food stuffs are detrimental to health of the consumers. This unsocial activity of the traders must be rooted out at all costs in every possible way. The health department has been doing its best, but it requires a concerted efforts between the health department, the 'public and the traders' representatives.

To enforce the Central Prevention of Food Adulteration Act of 1954, in the City, powers have been delegated to the Health Officer, the 10 Circle Health Officers, all the Sanitary Inspectors and in addition, the whole time 5 Food Inspectors to do the duties of the Food Inspectors. During the year under review, samples were taken and sent to the Corporation Public Analyst who has very well equipped laboratory at Ripon Building. The various items of food stuffs sampled, the results of the analysis, the disposal of the cases against the offenders, etc., are all given in great detail in the report of the Public analyst under the Section on Laboratory Services.

But it has to be admitted here again that work done is not quite satisfactory. The number of samples have to be increased and there should be some surprise element in the collection of samples. Action is being taken by the department to have mobile food sampling squads to take samples at random at any place in the City to check the offenders who otherwise escape because they know their usual Food Inspector and the divisional Sanitary Inspector.

iii. Milk Sanitation:

Milk is one of the important items of the food which is consumed by the majority of the people even though it may be in small quantities. Milk is one of the most important media for growth of the bacteria and there is always a potential risk of milk borne epidemics if the sanitation of the milk drawing centres and selling depots are not sanitarily kept. The cattle yards in the City are in a deplorable condition. There are several animals in the City that are not provided with shelter even and they are all tied outside on the road, etc. The department is seriously considering construction of small cattle yards for 20 to 50 heads of cattle at different places and rent them out to individual cattle owners with first preference to those who don't have any yard at all. Whatever we do the co-operation of the milk trade is utterly lacking. When the cattle yard owners are prosecuted for contravention of the bylaws or rules governing the running of the cattle yards, deterrent punishments only can correct them.



SECTION-C

SANITATION

2-MOITD32

MOITATMA2

Sl. No.	Description	Circle Offices										Total
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	
1	Number of renewal applications received for licences for food handling establishments under Section 279 of M.C.M. Act.	289	379	322	283	278	321	434	326	247	456	3,335
2	Number recommended	280	373	319	262	263	310	414	324	238	411	3,194
3	Number refused	9	6	3	21	15	11	20	1	9	45	140
4	Number pending	..	..	..	..	..	..	..	1	..	..	1
5	Number of new applications received under Section 279	26	8	40	24	14	26	3	6	17	14	178
6	Number recommended	24	8	36	24	12	23	3	6	12	12	160
7	Number refused	2	..	4	..	2	3	..	..	5	2	18
8	Number pending	..	..	..	..	..	..	..	..	..	..	..
9	Number of coffee hotels with meals section	8	29	14	11	17	17	50	20	11	27	204
10	Number of coffee hotels without meals section	8	57	34	15	15	19	56	37	28	46	315
11	Number of Eating Houses only	66	99	92	114	71	117	86	77	45	143	913
12	Number of Tea Clubs	..	..	..	8	6	15	26	4	..	8	67
13	Number of Tea Stalls, Tea shops or Tea Stands	200	165	192	143	162	132	129	135	112	228	1,598
14	Number of canteens attached to firms	8	18	1	3	3	23	25	11	8	12	112
15	Number of mobile canteens	..	3	..	..	..	1	..	..	..	..	4
16	Number of Lodging Houses without Boarding facilities registered under Public Health Act	1	26	7	2	3	6	57	11	5	5	123
17	Number of Lodging Houses with Boarding facilities registered as well as licensed under M.C.M. Act	..	21	2	1	..	9	17	4	7	..	61

The particulars of Prosecutions launched during 1964 under the Madras City Municipal Corporation Act,
Public Health Act and Prevention of Food Adulteration Act.

PROSECUTIONS LAUNCHED

S. No.	Dn. No.	Circle No.	Number of prosecutions launched	Number of persons convicted						Number of persons acquitted			Number of persons admonished	Number of cases were proceedings were stayed						
				Fine		Imprisonment														
			M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.	M.C.M. P.H.A. P.F.A.						
1	1—10	1	109	33	41	99	30	35	..	..	1	2	..	..	8	2	6
2	11—20	2	137	43	64	116	35	54	..	..	1	2	..	..	18	7	10
3	21—30	3	264	73	52	240	70	48	..	..	..	..	..	..	24	3	4
4	31—40	4	102	3	20	92	3	17	..	..	..	1	..	..	4	..	3
5	41—50	5	351	3	23	322	3	23	..	..	..	8	..	..	3	..	..	
6	51—60	6	74	..	13	64	..	13	..	..	..	..	..	..	8	..	..	
7	61—70	7	145	9	22	133	6	20	..	..	..	2	..	3	2	..	..	
8	71—80	8	155	4	44	149	4	41	..	..	2	..	2	..	..	..	1
9	81—90	9	106	..	23	104	..	16	..	1	..	..	..	..	2	..	6
10	91-100	10	398	1	25	308	1	23	..	..	..	3	..	..	85	..	2
Total			1,841	169	327	1,627	152	290	1	18	2	2	42	3	2	154	12	32

MILK SANITATION

S. No.		Circle Offices																											
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth																		
		P. A. M.	P. A. M.	P. A. M.	P. A. M.	P. A. M.	P. A. M.	P. A. M.	P. A. M.	P. A. M.	P. A. M.																		
1	Number of applications received for licences for milk trade under Section 299 of M.C.M. Act	77	2	..	78	4	..	126	..	52	1	..	39	2	..	20	..	44	2	..	56	3	1	42	2	..	48	2	6
2	Number recommended	67	1	..	58	4	..	118	..	45	1	..	37	2	..	19	..	35	2	..	45	3	1	41	2	..	30	1	2
3	Number refused	9	..	..	23	..	..	9	..	7	..	..	2	..	..	3	..	9	..	..	11	..	..	1	..	..	18	5	..
4	Number pending	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Number of licensed Milk Men	76	..	..	88	..	..	45	..	70	..	..	55	..	..	18	..	5	..	..	73	..	..	140	..	..	68	1	..
6	Number of licenses renewed for old depots other than those of M.C.M.S. Union.	40	1	..	48	..	..	62	..	19	2	..	35	1	..	14	2	26	..	..	43	3	..	18	1	..	18	..	2
7	Number of new Milk Depots opened by the Union during the year	6	..	..	8	..	..	11	..	3	..	..	2	..	..	2	..	8	..	..	2	..	..	..	..	..	1	..	..
8	Number of Un-licensed Milk Depots	8	1	..	34	..	..	70	..	24	..	..	29	1	..	16	..	22	1	..	42	3	1	17	1	..	15	..	2
9	Number of notices for effecting improvements issued in respect of Item 9	..	..	..	9	..	..	..	..	5	..	..	..	..	..	..	..	3	..	..	5	..	..	..	..	..	..	..	..
10	Number prosecuted for Non-Compliance	..	..	..	10	..	..	16	..	3	..	..	..	..	..	..	..	3	..	..	7	..	..	..	..	..	1	..	..
11	Number improved and made fit for licensing	..	..	..	7	..	..	23	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
12	Number closed as a result of action taken	2	..	..	3	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..

P—Private

A—Ayanavaram

M—Madhavaram

IV. Market Sanitation:

Here again the situation is far from satisfaction. Majority of the markets are so overcrowded that it seems to be very difficult even to improve them in the existing places. The owners of the markets in general do not seem to have any control even on their tenants with the result they are not able to enforce the bylaws governing the running markets. The Corporation when prosecutes them they simply pay the fine and do not attempt even to rectify the defects. This is alright with the public markets run by the Corporation, they also do require some improvements and deserve better attention and every attempt is being made to see that they set an example to other private markets. For want of sufficient and reliable raid vans the food destruction raids are not being conducted regularly and effectively. Food stuffs and the cut fruits exposed to flies and dust are responsible for transmission for several diseases. Here again the co-operation of the public is very essential. If only the people do not go in for such food stuffs, this evil will automatically stop.

Public Markets

The public demand for better marketing facilities with improvement in order to procure good food stuffs under hygienic conditions. The proposals for construction of the following markets were finalised, besides maintenance of the existing 13 markets owned by the Corporation.

<i>S. No.</i>	<i>Division No.</i>	<i>Circle No.</i>	<i>Location</i>
1	2	I	Devaraja Gramani Fisherman Colony, Tondiarpet. (Fish Market will be constructed with the aid of Government)
2	23	III	Parthasarathy Pillai Street, Washermanpet.
3	54	VI	Vaidyanatha Mudali Street, Chetput.
4	87	IX	Raja Annamalaipuram.

The undermentioned 13 existing markets are under supervisory control of a market Superintendent or the Divisional Sanitary Inspector who are responsible for the upkeep of the markets.

<i>S. No.</i>	<i>Division No.</i>	<i>Circle No.</i>	<i>Location</i>
1	29	3	Dr. Malliah Market, 96, Wall Tax Road.
2	40	4	Smith Field Market, Kalathiappa Mudali Street, and Rotler Street, Choolai.
3	45	5	Ayanavaram Market, Market Street, Ayanavaram.
4	51	6	Shenoy Nagar Market, Shenoy Nagar.
5	52	6	Market at the junction of Mc. Nicholl's Road and Taylors Road.
6	53	6	Jaganathapuram Market, Jaganathapuram 3rd Street, Chetput.
7	64	7	Fruit Market, N.S.C. Bose Road.
8	64	7	Moore Market, Poonamalle High Road.
9	67	7	Egmore High Road, Egmore.
10	80	8	Nadukuppam Market, Triplicane.
11	93	10	T. Nagar Vegetable Market, 61-A, Theagaraya Road.
12	93	10	T. Nagar, Mutton Market, 39, Theagaraya Road.
13	98	10	Razaak Market, 14/6, Bazaar Road, Periapet, Saidapet.

In addition to these there is a pavement vegetable market on the western side of Panagal Park, T. Nagar, Division No. 93.

Private Markets

In addition to the above Public Markets, there are 50 Private Markets in the City run by private owners for the benefit of the public. A licence is being issued to run such a market under the M.C.M. Act after satisfying the conditions laid down therein. These markets are daily inspected by the respective divisional sanitary inspectors and periodically, by the Circle Health Officers to ensure better sanitation and cleanliness.

The names with the location of Private Markets in the City during the year 1964 are given below:

<i>S. No.</i>	<i>Division No.</i>	<i>Circle No.</i>	<i>Name and Location of Market</i>
1	1	1	New Washermanpet, 322, T.H. Road.
2	1	1	Tondiarpet Market, Thandavaroya Gramany Street.
3	3	1	Kalmandapam Market, 13/12, Kalmandapam Road, Royapuram.
4	5	1	Old Washermanpet Market, 5/6, Venkatakrishna Street.
5	6	1	Pichandi Nadar Market, 82/83, Narasier Street.
6	8	1	Royapuram Market, 16, Mannarswamy Koil Street.
7	13	2	Macdonald Market, 67, Sengalaneer Pilliar Koil Street.
8	14	2	Olakadai Market, 180, Angappa Naicken Street.
9	15	2	Mannady Market, 89/90, Mannady Street.
10	17	2	Seven Wells Market, 111, Govindappa Naicken Street.
11	18	2	Chengam Bazaar Market, 84/85, Nattu Pillaiar Koil Street.
12	19	2	Kothawal Market, 1, Audiappa Naicken Street.
13	25	3	Kondithope Market, 32, Pedu Naicken Street.
14	29	3	Othavadai Market, 22/2, Toll Gate, Othavadai Street.
15	31	4	Lakshmi Market, 5, Selvavinayagar Koil Street.
16	32	4	Vyasarpadi Market, 15-E, Erukancheri High Road.
17	34	4	Otteri Market, 120-B, Strahans Road.
18	36	4	Demellows Market, 124, Demellows Road, Pattalam.
19	39	4	Choolai Market, 37, Vijayavigneswarar Koil Street.
20	41	5	Jamal Mohiddeen Market, 115, Market Street, Sembiam.
21	41	5	Balachandra Chetty Market, 49, Market Street, Sembiam.
22	42	5	Abdul Khader Market, 17/125, Madavaram High Road, Perambur.
23	48	5	Kandaswamy Koil Trust Market, 3, Pudu Street, Kosapet.
24	51	6	Aminjikarai Market, 329, Poonamallee High Road.
25	54	6	Nungambakkam Market, 17, Village Road, Nungambakkam.
26	55	6	Kodambakkam Market, 54, Kodambakkam High Road.
27	57	6	Thousand Lights Market, 47, Mount Road.
28	62	7	Purasawalkam Market, 27, Purasawalkam High Road.
29	64	7	K.A.C. Market, 314, Wall Tax Road.
30	64	7	Ellamman Devasthanam Market, Narayana Chetti Street, Periamet, Madras.
31	66	7	Chintadripet Market, 17, Arunachala Naicken Street.
32	67	7	Egmore Market, 92, Egmore High Road.
33	68	7	Connemara Market, 32, Harris Road.

<i>S. No.</i>	<i>Division No.</i>	<i>Circle No.</i>	<i>Name and Location of Market</i>
34	71	8	Moulana Market, 780, Triplicane High Road.
35	72	8	Moosa Sait Market, 90, Venkatesa Naicken Street.
36	76	8	New Janda Market, 291, Triplicane High Road.
37	76	8	Zam Bazaar Market, 439/441, Pycrofts Road.
38	78	8	Mirsahibpet Market, 184, Venkatachala Mudhaly Street.
39	78	8	Sultan Market, 15, Royapettah High Road.
40	81	9	Azeez Market, 71, Mount Road, Teynampet.
41	82	9	Thannithorai Market, 75, Royapettah High Road.
42	84	9	Mylapore Market, 80, Mylapore Bazaar Road.
43	86	9	Mandavalli Market, 65, Mandavalli Street.
44	88	9	Balasubramaniam Market, 11-A, Eldams Road.
45	89	9	City Improvement Trust Market, Foreshore, Santhome High Road, Raja Annamalaipuram.
46	90	9	Arunachalapuram Market, Adyar.
47	92	10	Vadapalani Andavar Market, 141, Arcot Road.
48	92	10	Trustpuram Market, Kodambakkam.
49	96	10	Kasiviswanathar Devasthanam Market, 40L, Easwaran Koil Street.
50	98	10	Karneeswarar Devasthanam Market, 5/6, Jeenis Road.

V. Meat Sanitation :

i. Slaughter Houses

The Slaughter Houses are important Institutions in the Public Health Organisation. Meat Hygiene is one of the important aspects of Veterinary Public Health, the primary object of which is to prevent transmission of diseases from animals to human-beings through meat and also to provide safe and wholesome meat and meat products under hygienic conditions for human consumption.

Efficient meat inspection is maintained in the existing Slaughter Houses with great difficulty with the limited facilities, plans for modernisation of the existing Slaughter Houses were prepared and the work is expected to be taken up shortly.

The Slaughter Houses maintained by the Corporation continued to function under the supervision of the Veterinary Surgeon. They are located as follows:

1. Cattle Slaughter House at Perambur.
2. Sheep Slaughter House (1) Perambur and Saidapet.
3. Pig Slaughter House (1) Perambur and Saidapet.

The meat Inspection is being done by the Superintendent and Assistant Superintendent who are qualified Veterinary Surgeons. They are assisted by a Conservancy Inspector who is incharge of the labour and the sanitation, after anti-mortem and post-mortem examinations. The inspected carcasses were stamped with indelible ink before passing out as fit for human consumption.

SLAUGHTER HOUSES



Newly constructed Slaughter House, Saidapet.

**The various food stuffs, seized and destroyed by the Sanitary Staff
during the year 1964 in each Circle are furnished.**

S. No.	Particulars of Foodstuffs	Circle Offices										Total
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	
1	Vegetables	458	613	1,109	5	313	698	316	1,997	325	714	6,548
2	Fruits	413	456	924	1,328	59	857	315	564	63	857	5,836
3	Meat	23	..	195	179	..	187	23	72	55	127	861
4	Fish Dried	19	..	7	3	27	589	..	268	17	..	930
5	Fish	118	17	498	252	135	75	531	572	119	215	2,432
6	Iddlies, Vadai, etc.	127	193	405	1,209	115	17	358	..	68	562	3,049
7	Syrup	..	178	219	5	8	305	..	279	..	28	1,022
8	Carcasses	..	..	..	18	..	..	..	..	..	..	18
9	Tea and Coffee (in Kettles)	..	115	..	21	..	..	..	..	..	..	136
10	Other articles	159	598	372	1,115	319	421	458	857	415	1,058	5,772

The details of meat inspection done at the Slaughter Houses during the year 1964 are as follows:—

Kind of Animal	No. of animals brought for inspection for slaughter	No. Dis-allowed	No. actually slaughtered	No. of carcasses rejected after Postmortem		No. of organs condemned
				WHOLE	PORTION	
Cattle	30,511	2,747	27,764	..	353	6,610
Sheep and Goat	5,12,497	1,191	5,11,306	52	..	7,431
Pigs	3,583	..	3,583	..	..	539

As in the previous years during this year also Students from the Medical Colleges and other institutions in the City and outside visited the Slaughter Houses. They were given all facilities to study the working of the Slaughter Houses and short lecture with practical demonstrations on meat hygiene and meat inspection were also given.

The Students from the Madras Veterinary College were regularly attending the Slaughter Houses in the evening accompanied by the concerned lecturers for classes in Meat Hygiene and genetics. Flaying classes for Butcher boys, Livestock Inspectors and Block Development Officers from the district were also conducted by the State Animal Husbandry Department.

Pig Raids were conducted in the various parts of the City and 39 pigs were caught. They were slaughtered and the pork auctioned for Rs. 357.

Raids were also conducted for detecting unstamped mutton offered for sale in the stalls. 5 goat carcasses and 140 lbs. of beef were confiscated and destroyed.

Raids for unwholesome foodstuffs sold on the roadside in the various parts of the City were conducted. 2,513 lbs. of food stuffs were removed in the raid van and destroyed during the year.

The Slaughter Houses at Saidapet were reconstructed on the modern lines providing greater facilities at a cost of Rs. 1,15,000. The same was put in use on 16-9-1964.

The buildings for the carcass utilisation scheme financed by State Khadi Village Cottage Industries Board was completed during the year. The Scheme will start functioning very shortly.

MEAT INSPECTION

S. No.	Particulars	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of private mutton stalls at the beginning of the year ..	6	11	17	14	25	24	18	12	17	22	166
2	Number of mutton stalls opened during the year ..	..	..	1	4	2	4	..	1	2	1	15
3	Number of beef stalls at the beginning of the year ..	1	6	4	12	4	8	6	4	6	9	60
4	Number of beef stalls opened during the year ..	..	..	2	1	1	..	..	..	..	..	4
5	Number of pork stalls at the beginning of the year ..	..	..	..	..	..	..	..	..	..	..	..
6	Number of pork stalls opened during the year ..	..	..	..	..	..	..	..	..	..	..	..
7	Number of unstamped carcasses seized ..	4	..	..	..	..	..	3	..	..	..	7
8	Number of cases of illicit slaughter detected ..	..	..	..	..	..	..	..	..	..	..	..

ENVIRONMENTAL SANITATION

Though this subject includes several things pertaining to Water Works, Special Works, the Conservancy, etc., yet this report confines itself only to the residences and the amenities provided in the houses for the benefit of the tenants from the Public Health point of view. The inspections done by the sanitary staff and the action taken by the department to rectify the defects etc., are enumerated under this action. The work turned out by the Sanitary staff is not at all commendable but at the same time it should be stated in all fairness that one Sanitary Inspector for two municipal divisions will not be able to do enough expected of him in view of the various types of duties he has to perform. If each division has one Sanitary Inspector, which is the minimum from any standard one can expect better performance.

HOUSING

S. No.	Particulars	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of houses other than huts in the Division	7,145	10,332	6,052	8,501	13,455	14,927	10,720	8,085	11,174	28,334	1,18,725
2	Number of houses used for dwelling purposes	6,474	8,229	4,983	8,119	12,932	13,903	9,521	6,786	10,040	22,610	1,03,597
3	Number of houses used for purposes other than dwelling	671	2,103	1,069	382	523	1,024	1,199	1,299	1,134	5,724	15,128
4	Number of huts	4,825	315	2,212	8,279	4,846	23,450	834	2,661	11,624	19,534	78,580
5	Number of building applications received from the Works Department	31	69	38	45	8	23	38	21	67	31	371
6	Number recommended for sanction in item No. 5	25	57	34	26	8	22	28	20	46	30	296
7	Number of building applications recommended for refusal on sanitary grounds	6	12	4	18	2	1	10	1	21	8	83
8	Number of tenements built prior to 1-1-64	..	16	1	267	..	30	4	1	..	..	319
9	Number of tenements built prior to 1-1-64 and brought under occupation in 1964	..	..	..	..	..	..	..	..	..	..	..
10	Number of tenements built and brought under occupation in 1964	..	..	..	..	..	..	..	..	..	..	..
11	Number of tenements under construction at the end of the year 1964	..	..	..	1	..	..	..	..	..	..	1

HOUSE INSPECTION

S. No.	Particulars	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of houses inspected as a routine measure ..	3,094	2,908	1,997	956	1,392	2,089	1,647	2,645	2,023	4,514	23,265
2	Number of houses inspected on complaints made ..	146	162	68	51	74	170	67	67	39	289	1,133
3	Average Number of houses inspected per mensem ..	243	326	256	83	257	199	180	221	195	397	2,357
4	Number of houses found untenanted ..	1	41	22	Nil	140	78	11	3	..	10	306
5	Number of houses found defective for want of protective water supply ..	..	29	40	9	81	28	12	12	..	12	223
6	Number of houses found defective for want of ventilation ..	15	19	140	47	41	22	4	34	..	26	348
7	Number of houses found defective for want of proper drainage arrangements ..	32	25	64	39	268	39	17	28	2	103	617
8	Number of houses found defective otherwise ..	395	298	86	88	180	94	46	66	53	310	1,616
9	Number of notices issued for rectification of defects ..	342	347	280	117	209	134	59	126	54	451	2,119
10	Number prosecuted for non-compliance ..	15	5	21	7	97	6	15	9	..	23	198
11	Number of houses repaired as a result of action taken ..	252	339	261	110	140	125	34	113	55	428	1,857

LATRINE ACCOMMODATION

S. No.	Particulars	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of houses found without any latrine ..	2	13	15	508	34	7	..	..	16	10	605
2	Number of notices issued in respect of item No. 1 ..	2	13	15	56	34	7	..	..	16	10	153
3	Number of houses provided with latrine accommodation as result of action taken ..	27	13	15	25	34	5	..	..	16	10	115
4	Number of houses found defective for want of adequate latrine accommodation ..	27	9	25	24	..	34	9	1	4	8	141
5	Number notices issued in respect of item No. 4 ..	27	9	25	24	..	34	9	1	4	8	141
6	Number of houses provided with additional latrine accommodation as a result of action taken ..	27	7	21	2	..	24	9	..	..	8	98
7	Number of houses in sewerred areas without F.O.Ls. ..	9	2	30	179	66	2	2	1	31	2	324
8	Number of notices issued for conversion of masonry latrines with F.O.L. ..	9	2	38	48	66	2	2	2	16	2	187
9	Number of houses therein the masonry latrine when converted into F.O.Ls. as a result of action taken ..	9	1	30	27	35	2	2	1	..	8	115

CESS POOLS

S. No.	Particulars	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of houses with cess pools	49	..	44	580	1,030	481	..	..	27	9,246	11,457
2	Number of houses without cess pools ..	..	..	13	493	120	23	..	..	14	32	695
3	Number of notices issued in respect of item No. 2 ..	..	..	13	..	40	15	..	..	14	32	114
4	Number of houses provided with cess pools as a result of action taken ..	..	..	13	..	19	15	..	..	14	32	93
5	Number of notices issued in respect of inadequate cess pools ..	..	..	8	..	20	2	..	..	1	..	31
6	Number of houses provided with enlarged cess pools as a result of action taken ..	..	..	8	..	18	2	..	..	1	..	29

INDUSTRIAL SANITATION

The City is more and more industrialized. The problem of various nuisances caused by the Industrial smoke, noise, vibration, fumes and trade effluents is causing great concern, these will become worse in future unless the zonal restrictions are strictly enforced and the nuisances are minimized. The discriminate exclusions of individual places from residential areas in pucca bined areas and licencing of industries is very dangerous, and this should be completely discouraged and the existing ones also have to be slowly shifted to non-residential areas, as otherwise, the industrial hazaards to the residents will become worse. For a City of this magnitude, there should be another H.O. solely incharge of Industrial Sanitation and the industrial estates should be planned on large scale even for smallscale industries and cottage industries so that they can develop without any hindrance at the sametime the public are not disturbed and allowed to live peacefully in their houses.

OFFENSIVE TRADES—INDUSTRIAL SANITATION—TRADES—LICENCES STATEMENT

S. No.	Particulars of Trades	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of renewal applications received for old offensive trades (Section 287 of M.C.M. Act)	744	1,706	450	638	455	828	705	734	682	1,023	7,965
2	Number of applications recommended ..	616	1,542	380	539	399	525	594	536	480	638	6,249
3	Number of applications refused ..	..	5	2	1	..	..	..	..	1	55	64
4	Number of applications pending ..	128	159	68	98	56	303	111	198	201	330	1,652
5	Number of new applications received for offensive trades under Section 287 ..	223	240	392	165	65	141	70	37	48	165	1,546
6	Number of applications recommended ..	163	202	172	101	40	99	48	23	25	69	942
7	Number refused for sanitary reasons other than the prohibition under P.H. Act											
8	Number refused in view of the prohibition under P.H. Act	23	15	126	13	16	11	5	12	15	21	257
9	Number of appeals referred by parties to the Licence Appeals Committee	37	23	94	51	9	31	17	2	8	75	347
10	Number of appeals allowed by Licence Appeals Committee	4	11	22	6	9	6	6	7	7	3	90
		..	5	8	4	6	..	4	4	3	..	36

S. No.	Particulars of Trades	Circles										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
11	Number of Appeals rejected by Licence Appeals Committee ..	1	8	9	..	4	..	2	..	..	..	24
12	Number of references made to the Council ..	..	4	7	..	1	..	1	2	..	..	15
13	Number of cases in which Council revised the decision of Licence Appeals Committee ..	..	..	..	..	..	..	..	..	..	..	..
14	Number of cases in which Council upheld the decision of Licence Appeals Committee ..	..	3	7	..	..	..	1	1	..	..	12
15	Number of cases in which the Council decision was given effect to ..	..	..	..	..	..	..	..	1	..	..	1
16	Number of cases in which Government decision or orders were sought in respect of Councils decision ..	..	..	7	..	..	..	1	1	..	..	9
17	Number of cases in which Government orders were received ..	..	..	..	..	..	..	1	2	..	..	3

MISCELLANEOUS

S. No.	Particulars	Circle Offices										
		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Total
1	Number of Laundries	70	94	92	101	112	96	117	90	85	133	990
2	Number of Hair Dressing Saloons	96	153	120	165	121	99	147	89	77	161	1,228
3	Number of Sweet meat stalls	19	27	28	20	10	10	30	14	12	9	179
4	Number of Fire wood Depots	45	35	72	80	61	30	42	28	16	42	451
5	Number of Charcoal Depots	13	43	29	24	7	19	31	18	5	16	205
6	Number of Fire wood and Charcoal Depots	39	8	19	29	70	64	30	39	30	40	683
7	Number of Aerated Water Factories	8	6	6	5	7	7	10	5	2	14	70

PORT SANITATION

As usual the maintenance of sanitation and water supply within the Port Area was looked after by the Port Health Officer. Medical check-up of passengers and new was also conducted by him to detect and isolate infectious cases landed from vessels arrived at the Port during the year.

A brief report about Port-Sanitation is given below:—

1. Out of 1,271 Vessels arriving at his port during the year under review only 31 vessels with 2,451 crew and 6,517 passengers were inspected on arrival during the year. 2 cases of Chicken-pox were landed ex. 2 ships and on arrival suitable measures were taken to prevent the spread of the diseases.

2. Out of 1,266 vessels leaving this port during the year under review only 419 vessels with 32,729 crew and 24,954 passengers were inspected at the time of departure for foreign countries.

3. The personal effects of the infected crew and passengers and their contacts as well as 831 cases, 27 boxes, 39 packages, 2 bales and 1 trunk of imported second hand clothing intended for distribution were disinfected before release.

Bedding, clothing, etc., of 603 new crew were inspected and disinfected before articles were taken on board.

4. Seamen's provision of 50 vessels were inspected.

5. 40 vessels were examined with regard to the Medical Stores kept on board, they were maintained according to the prescribed scales and wherever necessary suggestions were made to make good the shortage, if any.

6. Imported food stuffs were inspected at the Port of Madras under the Prevention of Food Adulteration act., 1954 and on request from the Traffic Manager, Madras Port Trust in connection with unclaimed articles of food lying in their godowns before auctioning them for sale.

During the year, the following such articles were inspected, all of which were declared fit for human consumption:

	LBS.
1. Cow and Gate	.. 912
2. Milk Powder	.. 75,19,686
3. Lactogen	.. 3,034
4. Food colours	.. 33,195
5. Eledon Powder	.. 35,010
6. Ovaltine	.. 360
7. Horlicks	.. 312
8. Canned Fish	.. 94
9. Olive Oil	.. 664
10. Nutmugs	.. 2,000
11. Agar Agan	.. 80
12. Cloves	.. 84,441
13. Raw Gum Base	.. 4,962
14. Malt Extract	.. 960
15. Cheese	.. 1,149
16. Edgell Cream	.. 329
17. C. Brand stuffed olivo	.. 72
18. Food stuff	.. 264
19. Condensed Milk	.. 2,031
20. Betel nuts	.. 9,46,740
21. Canned Provision	.. 32
22. Cussia	.. 528
23. Maco	.. 320
24. Yeast Food	.. 72
25. Cornmeal	.. 1,85,89,728
26. Butteroil	.. 49,73,429
27. Sauce	.. 504
28. Butter Ghee	.. 1,83,256

		LBS.
29.	Eledon Acid Butter Milk Powder	.. 3,192
30.	Bread Flour	.. 29,352
31.	Skimmed Milk Powder	.. 1,800
32.	Chicory Powder	.. 1,44,048
33.	Malt	.. 18,880
34.	Wheat flour	.. 15,11,889
35.	Wheat	.. 39,264
36.	Edical Supra	.. 48
37.	Anchor brand Milk Powder	.. 2,880
38.	Oster Milk	.. 72
39.	Coco beans	.. 3,220
40.	Ghee	.. 4,03,098
41.	Tobacco	.. 80
42.	Corned Beaf	.. 33
43.	Coffee Powder	.. 6,840
44.	Coriander seeds	.. 19,250
45.	Pea Beans	.. 95,000
46.	Canned food	.. 336
47.	Miscellaneous food stuff	.. 96
48.	Glucose Powder	.. 8,744
49.	Cotoins	.. 48
50.	Bakery Hops	.. 1,800
51.	Bulgar Wheat	.. 27,400
52.	Cocoanut oil	.. 80
53.	Raw Cashewnuts	.. 72,760

However the following items were declared unfit for human consumption either after physical examination or after receiving analysis reports to that effect from the King Institute, Guindy:

Unfit		LBS.	
1.	Dryond flour	.. 320	
2.	Dry Milk Powder	.. 18,768	
3.	Cornmeal	.. 19,990	
4.	Wheat	.. 6,800	plus 150 tons
5.	Bulgar Wheat	.. 1,320	
6.	Chicory Powder	.. 80	
7.	Food colours	.. 1,104	
8.	Breatred sliced	.. 6,912	
9.	Consentrated tomato cream	.. 5,848	
10.	Fullcream sweeted	.. 96	
11.	Vegetable non-essential	.. 80	
12.	Butter oil	.. 264	
13.	Rice	.. 148	
14.	Wheat flour	.. 80	
15.	Tobacco	.. 120	

7. 301 Seamen trainees, seamen for continuous certificates of discharges and other candidates for employment as seamen were medically examined and certificate of fitness or otherwise issued.

8. On receipt of radio message from the Masters of 11 vessels at sea seeking medical advice in connection with sickness on board the vessels, necessary advices were sent immediately to the Masters concerned.

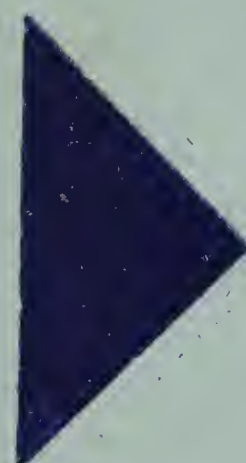
9. Sanitation of Port area was looked after by the Madras Port Trust, and maintained satisfactorily. Storage tanks of water supply of the Port area were cleaned regularly and water from these sources was analysed at regular intervals. Measures were taken to rectify that defects when noticed.

10. 28 Deratisation Exemption Certificates and 4 permits were issued at this port.

11. 220 vessels seeking Radio Pratique were granted the same on furnishing the requisite message.

SECTION-D

MEDICAL RELIEF





SECTION-D

MEDICAL REEFER

1. HOSPITALS

Infectious Diseases Hospital, Tondiarpet.

INTRODUCTION

Infectious Diseases Hospital the only of its kind for the City of Madras the population of which is over 20,000,00 has completed its 40th year of service to the citizens of Madras and also to the sub-urban population on the 31st December 1964. On the whole 16,855 cases were admitted to the Hospital for various Infectious Diseases during the year of which 1,914 were from outside limits of the City. The mortality rate for the year was 5.03%. Small pox was endemic throughout the year and Cholera was prevalent in an Epidemic form during November and December. The Madras City had to face a very big and unprecedented Epidemic of Dengue like Fever called the "Madras Epidemic Haemorrhagic Fever during the period August to October and in all 4,245 cases were admitted and treated as inpatients and 1,517 as out patients. There was no increase both in the permanent accommodation and in the strength of the permanent staff during the year but temporary accommodation was made available by putting up thatched sheds on the masonry plinths for accommodating increased in number of cases during Epidemics and likewise temporary staff was also appointed.

As has been said during the previous years the necessity for a suitable increase in the accommodation and in the strength of staff as a permanent measure is very great considering the day today growing population and increase in the number of cases in the City.

The Hospital has continued its service as a training centre for the Medical Officers of Health from different countries in respect of Diagnosis and treatment of various Infectious Disease cases particularly of Small-pox and besides this, Medical Students from various Medical Colleges of the City and the Christian Medical College at Vellore had undergone the course in Infectious Diseases during the year. Dr. A. Ramachandra Rao continued to be the Superintendent of the Hospital till December 11, 1964. When he was promoted as Health Officer, Corporation of Madras and Dr. I. Prahalad, M.B.B.S., has taken over the post of Superintendent. Dr. A. Laxmi, R.M.O. has gone on for higher studies to All India Scheme of Tropical Medicines of Surgery at Calcutta.

BUILDINGS

An upto date Kitchen Block and an Administrative Block were constructed during the year but still they are not handed over. The expenditure on these constructions were met from the Loan Funds paid by the Government.

PATIENTS AND THEIR CARE

The Hospital admitted 16,855 new cases of various Infectious Disease during the year under report and in all 17,006 cases were treated including those remained on 31st December 1963. Out of this 15,813 were discharged cured and 868 died and 325 remained in the Hospital at the closure of the year.

Statement No. 1.—Shows the total number of cases admitted and treated for various diseases during the year 1964.

Particulars	Number of cases	Number of contacts
Number remained at 00.00 hours on 1-1-1964..	151	51
Number admitted during the year ..	16,855	5,333
Total number treated ..	17,006	5,384
Total discharged and cured ..	15,813	5,321
Total died ..	868	..
Total remaining at 24.00 hours on 31-12-64 ..	325	63

The overall case fatality rate was only 5.03% as against 6.8% in the previous year. 75% of the total deaths during the year under report were due to the belated removal of the cases to the Hospital and that too mostly unprotected children suffering from Small-pox.

The total number of admissions and deaths for the year are shown in Graph No. 1.

Statement showing the admissions and deaths disease war during the year 1964.

Diseases	City			Mofussil			Total		
	Admis- sions	Deaths	C.F.R.	Admis- sions	Deaths	C.F.R.	Admis- sions	Deaths	C.F.R.
Small-pox ..	2,173	485	22.3%	462	92	19.9%	2,635	577	22.9%
Chicken pox ..	3,188	3	.09%	373	..	..	3,561	3	.08%
Measles ..	861	8	.9%	51	..	..	912	8	.9%
Mumps ..	89	..	..	13	..	..	102	..	..
Cholera ..	2,213	111	5.0%	363	21	5.7%	2,576	132	5.1%
Madras epidemic Haemorrhagic fever ..	4,245	18	.04%	179	3	1.6%	4,424	20	.08%
Gastro entrities	1,557	54	3.4%	367	18	4.8%	1,924	72	3.7%
Other diseases	615	49	7.9%	106	6	5.6%	721	55	7.6%
Total ..	14,941	728	4%	1,914	140	7.3%	16,855	868	5%

SMALL-POX

Small-Pox prevailed in an Epidemic form in the first half and in an Endemic form in the second half of the year. There were 2,173 cases admitted from the City and 462 from the Mofussil as against 2,339 and 166 respectively in the previous year. During the year, though there is a slight decrease in the number of admissions and deaths in the City as can be seen from the statement, the Small Pox cases reported from suburban areas were 3 times the number admitted during the previous year. The majority of admissions viz. 663 and deaths 264 due to Small Pox were only in the age group 0-4 years. Out of the 663 admissions in this particular age group only. 31 were amongst successfully vaccinated out of which 26 were discharged cured from the Hospital.

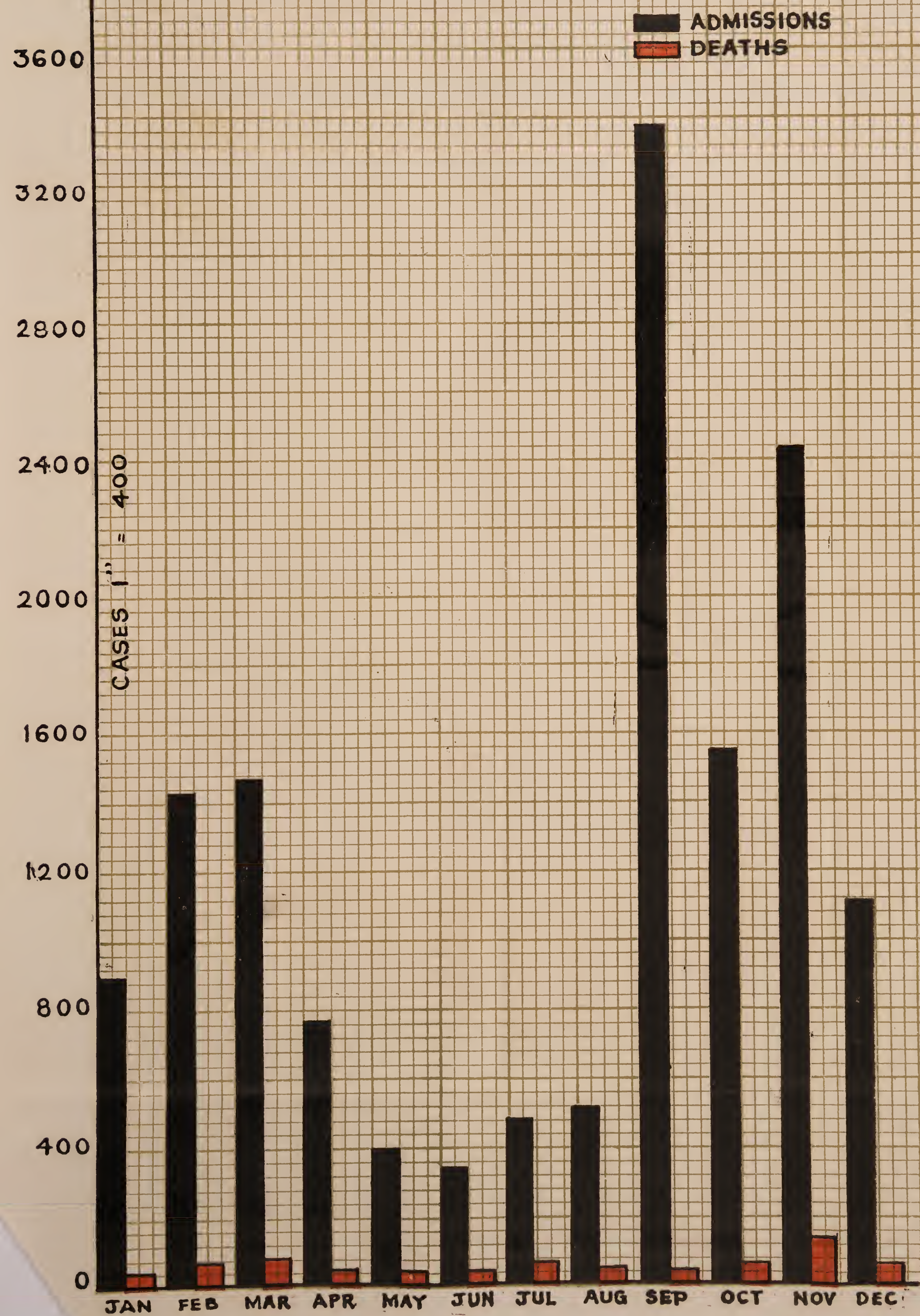
Statement No. 3.—Shows the admission and deaths due to Small-pox month-war (City and Mofussil).

Months	City		Mofussil	
	Admissions	Deaths	Admissions	Deaths
January ..	199	28	10	..
February ..	315	62	60	..
March ..	309	76	50	..
April ..	187	34	21	6
May ..	126	43	15	..
June ..	152	31	27	10
July ..	227	57	97	13
August ..	177	42	90	20
September ..	104	27	28	2
October ..	147	39	20	2
November ..	96	25	12	2
December ..	134	21	32	5
Total ..	2,173	485	462	92

INFECTIOUS DISEASES HOSPITAL TONDIARPET MADRAS-21

ALL DISEASES 1964

ADMISSIONS AND DEATHS. MONTH WISE

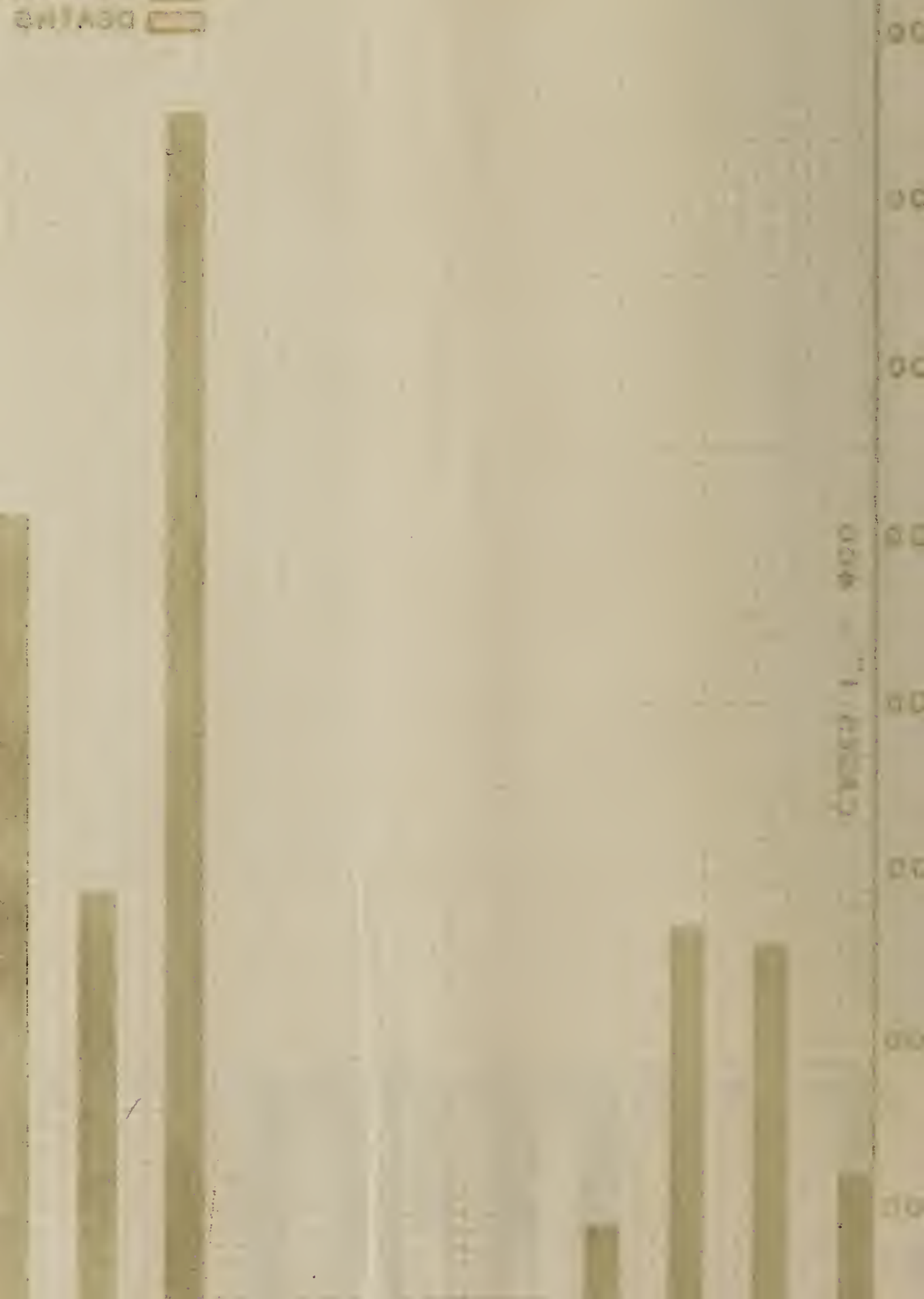


INFECTIONS DISEASES HOSPITAL TORONTO M

ALL DISEASES 1964

ADMISSIONS AND DEATHS MONTH

ADMISSIONS
DEATHS



Statement No. 4.—Showing the age and sex war distribution of cases of Small-pox.

Months	0 to 4 years		5 to 14 years		15 to 29 years		30 years and above		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
January	34	19	17	27	40	30	19	13	110	89
February	44	48	36	29	55	46	31	26	166	149
March	51	48	28	39	54	40	26	23	159	150
April	28	15	17	28	29	26	25	19	99	88
May	24	15	16	18	15	19	10	9	65	61
June	19	20	10	18	30	30	11	14	70	82
July	31	27	21	25	42	36	18	27	112	115
August	30	24	17	16	40	18	14	18	101	76
September	18	20	10	4	21	16	5	10	54	50
October	21	21	13	15	19	30	12	16	65	82
November	16	20	12	8	9	15	11	5	48	48
December	18	25	10	15	15	30	6	15	49	85
Total	334	304	207	242	369	336	188	195	1,098	1,075

The total number of admissions month-war and also the deaths due to Small pox-for the year are shown in Graph II.

The total number of admissions due to Small-pox with reference to Age and Sex Distribution are shown in Graph III.

CHOLERA

The City was free from Cholera till the 3rd Quarter of the year but a severe epidemic of Cholera broke out during the last quarter of the year. There were in all 2,213 cases admitted from the City and 363 from out side the City limits. The mortality rate with reference to the total treated was 5.1% as against 5.8% in the previous year. One ambulance was stationed throughout day and night at 9th-Circle Office for the removal of cases reported from South Madras to avoid delay in Transport. This system worked alright.

Statement No. 5.—Showing the attacks and deaths month-war due to Cholera (City and Mofussil).

Months	City		Mofussil	
	Admissions	Deaths	Admissions	Deaths
January	39	1	59	1
February	10	..	12	..
March	..	..	..	..
April	1	..	..	..
May	..	..	..	..
June	..	..	..	..
July	..	..	..	..
August	..	..	1	..
September	9	2	1	..
October	116	9	26	2
November	1,713	80	133	10
December	325	19	131	8
Total	2,213	111	363	21

Admissions and deaths due to Cholera during the year are shown in the graph IV.

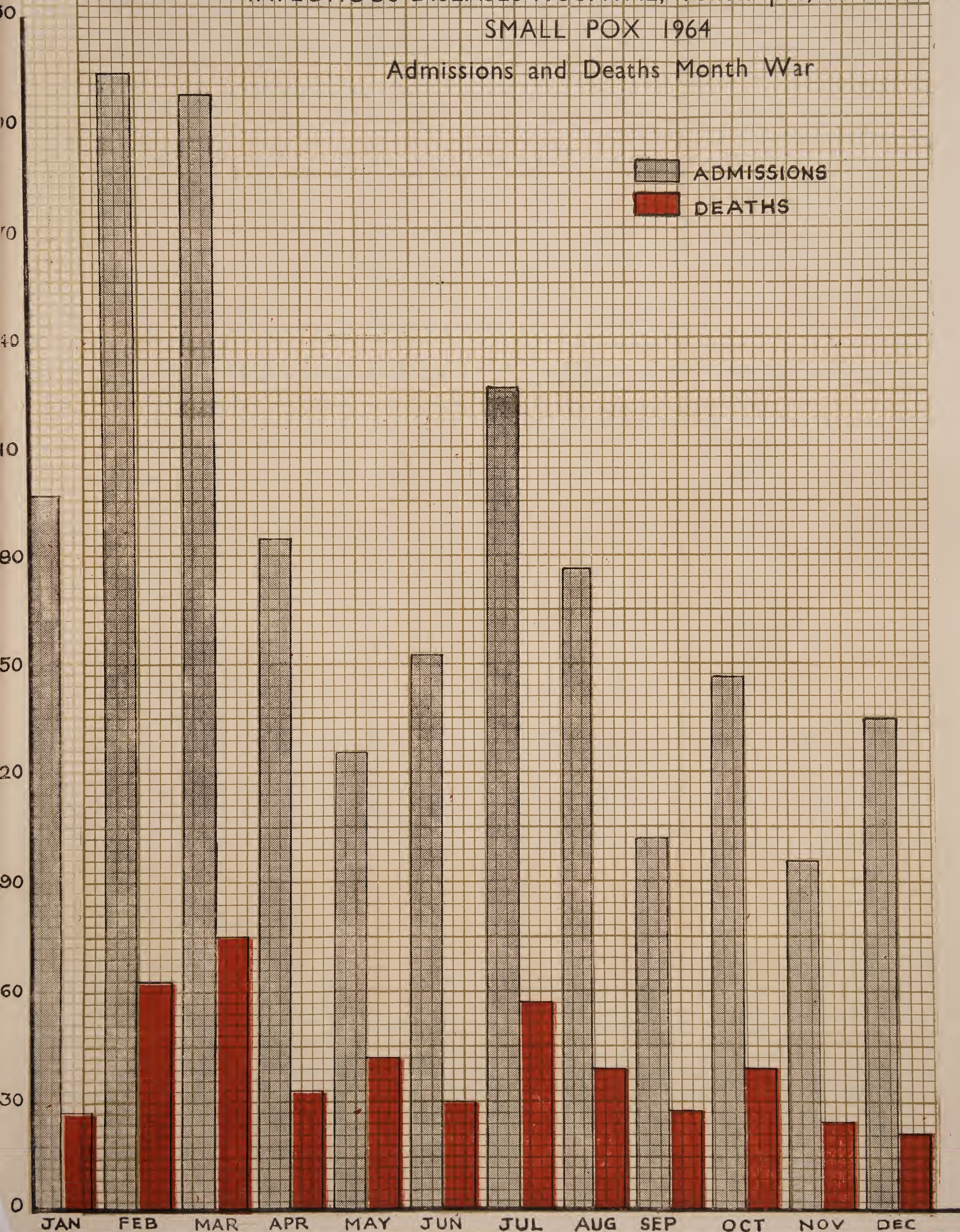
MADRAS EPIDEMIC HAEMORRHAGIC FEVER

The Madras City has also faced a very big and unprecedented Epidemic of Dengue Like Fever during the year. The Epidemic broke out from 19th August 1964. The highest number of cases treated on a single day was 416 and this was on 21-9-1964. Out of this 209 were admitted as inpatients. On 17th September 236 cases were admitted to the Hospital as inpatients which was the peak day of admission in respect of inpatients. An out patient department was introduced in the Hospital for the Haemorrhagic on 19th September and was closed on 22nd September. The total cases of Madras Epidemic Haemorrhagic Fever was 5,762 out of which 4,245 were treated as inpatients. The mortality rate was 0.4%. The Director, Virus Research Centre, Poona, was in Madras for about a week to investigate the spread of Madras Epidemic Haemorrhagic Fever. The paired samples of Blood Seera were collected from the patients on the day of admissions and on discharge. The blood seera was examined at Vellore Research Institute. Ranging of cases of this fever was declared as "Chikun Gunya," one of the virus diseases belong to group A of ARBU-VIRUS diseases.

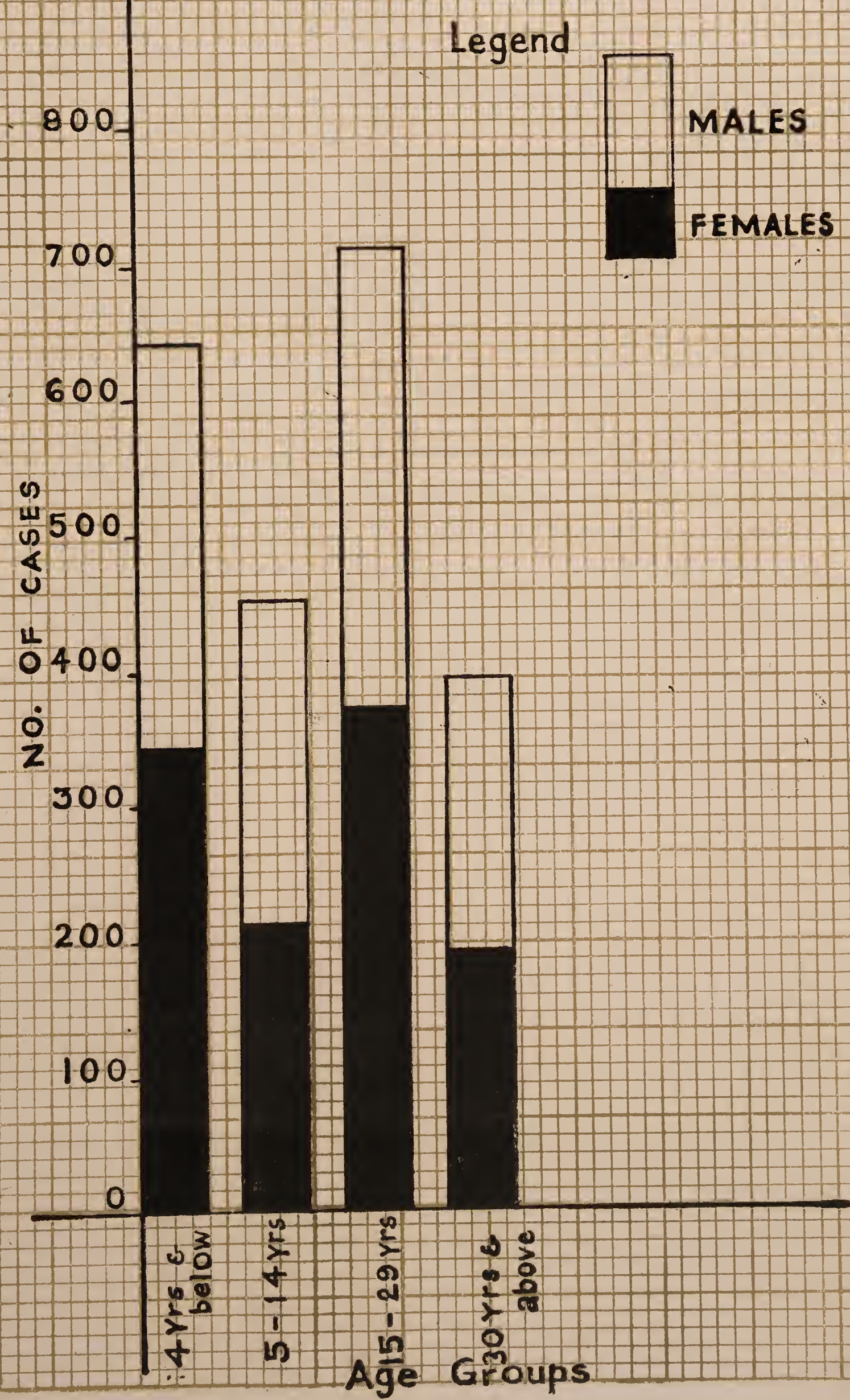
INFECTIOUS DISEASES HOSPITAL, Tondiarpet, Madras-21.

SMALL POX 1964

Admissions and Deaths Month War

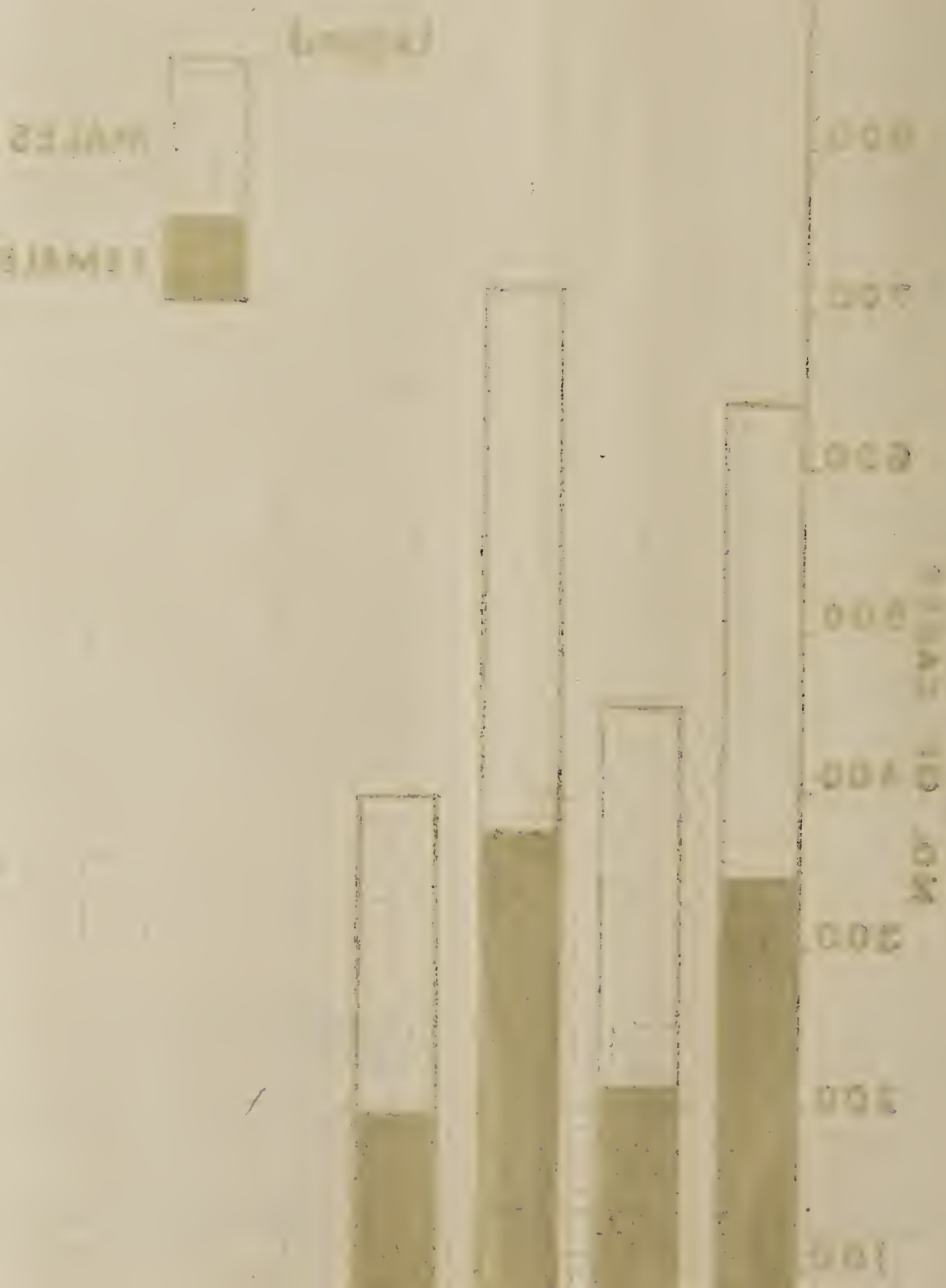


I. D. HOSPITAL MADRAS
SMALLPOX ADMISSIONS
Age & Sex Distribution



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I.D. HOSPITAL MADRAS SMALLPOX ADMISSIONS Age & Sex Distribution



INFECTIOUS DISEASES HOSPITAL TONDIARPET, MADRAS-21.

CHOLERA 1964

ADMISSIONS AND DEATHS, MONTH WISE

1800
1600
1400
1200
1000
800
600
400
200
0

CASES 1" = 200

ADMISSIONS
DEATHS

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC





Statement No. 6.—Shows the admissions and deaths due to Epidemic Haemorrhagic Fever (City and Mofussil).

Months	City		Mofussil	
	Admissions	Deaths	Admissions	Deaths
January	.. ..	..	..	..
February	.. ..	..	..	..
March	.. ..	..	..	..
April	.. ..	..	..	..
May	.. ..	..	..	..
June	.. ..	..	..	..
July	.. ..	..	..	..
August	.. 42	..	2	..
September	.. 3,095	9	84	3
October	.. 1,083	9	92	..
November	.. 23	..	1	..
December	.. 2	..	..	..
Total	.. 4,245	18	179	3

The Fortnightly admissions and deaths due to Madras Epidemic Haemorrhagic Fever during the year 1964 are shown in Graph V.

LABORATORY SERVICES

The Virus cum Research Laboratory of this Hospital has completed its 2nd year service in regard to Research and Bacteriological diagnosis of cases of Infectious Diseases on 22-11-1964. The Bacteriological section of the Laboratory has examined 4,218 specimens for *Vibrio Cholera* out of which 2,130 were declared Positive and 2,088 as Acute Diarrhoea. Routine examinations of Urine and Motions of Small-Pox cases were done to total of 1,077. During the Epidemic of Haemorrhagic fever differential counts of blood for patients were done.

The virus section of the Laboratory which is maintained by the World Health Organisation Unit has been continuing its research on viruses with a special reference to the most dangerous variety Virus Haemorrhagic Small-Pox.

The Saline preparation section of the Laboratory has manufactured 21,750 pints of Glucose Hypertonic Saline for utilisation towards the treatment of Cholera and acute Diarrhoea cases. The distilled water required for the preparation of Saline was collected by means of Electrical Stilla in the Hospital itself.

The Indian Council of Medical Research has been in the year under report, continuing its trial projects on cases of Small-Pox both under Therapeutic as well as Prophylactic measures with the newly invented drugs. The results have not been finalised.

RESEARCH

The Indian Council of Medical Research has been in the year under report, continuing its trial projects on cases of Small-Pox both as therapeutic as well as prophylactic measures. With newly diseased drugs the results of which have not been finalised.

Under the auspices of Indian Medical of Council Research Dr. A. Ramachandra Rao, Superintendent of the Hospital has been the Officer in charge of the following research projects.

1. The Therapeutic Trials with M. & B. 7714 of Small-Pox which started on 27th December 1962, were completed in March 1964. A paper written by Dr. A. Ramachandra Rao and Dr. Mc. Fedzean was read before the New York Academy of Science, New York, in December 1964 and was well received.

2. Prophylactic Trials with M. & B. 7714 on contacts of Small-Pox patients, which were started in February 1964, continued throughout the year under Dr. A. Ramachandra Rao the Officer in charge. He was assisted by Dr. Mackendrik of St. Annes Hospital, London, Dr. Velayudham, Asst. Research Officer, Indian Council of Medical Research and Kumari Kamalakshi, Research Assistant, Indian Council of Medical Research and other field staff. The work is under progress.

The Virus Research Unit of Infectious Diseases Hospital, Tondiarpet has continued the 2nd year of Research. It is mainly concerned with.

1. Cultures of small-pox virus on different tissues.
2. Study of blood coagulation defects in Haemorrhagic small-pox cases.
3. Air sampling studies for virus of Variels in Hospital wards.
4. Blood grouping and small-pox incidence.

Leon Mrs. St. Vincent, continued to be in charge of the Laboratory. The following Research Fellows worked during the year:

1. Mr. John Robert.
2. Mrs. Perry.
3. Mrs. Marsy.

Further Dr. Decking from Holand and Dr. Githins from Denver also worked in the Laboratory.

AMBULANCE SERVICE

Though the Hospital was in possession of 6 ambulances, the ambulance service could not be rendered upto satisfaction during the Epidemics. But to combat the situation the services of Child Welfare Scheme Ambulance were requisitioned on and of. Further due to constant service almost all the Hospitals ambulances went out of order one by one every now and then. Of course the defects were rectified by the Corporation Lorry Station spontaneously and the van could be reput on the road. On the whole much difficulty was experienced in respect of Ambulance service during the year and this was due to continued Epidemics of various Infectious Diseases. There is now an immense necessity for the replacement of the existing Ambulance by new ones.

MEDICAL TRAINING

As usual the under graduate students from Madras Stanley and Kilpauk Medical Colleges of Madras and Mission Medical College, Vellore attended lectures on Infectious Diseases in the Hospital.

MISCELLANEOUS

Dr. A.R. Rao, the then Superintendent of the Hospital was deputed by the Corporation of Madras to take part in the Small-Pox Expert Committee meeting as an Adviser and consultant on Small-Pox in the Month of January 1964.

INFECTIOUS DISEASES HOSPITAL TONDIARPET
MADRAS-21

MADRAS EPIDEMIC HAEMORRHAGIC FEVER
1964

ADMISSIONS AND DEATHS

2250

2000

1750

1500

1250

1000

750

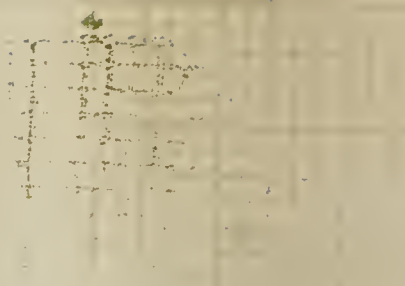
500

250

0

ADMISSIONS
DEATHS

AUGUST 16th TO 31st SEPTEMBER 1st TO 15th 16th TO 30th OCTOBER 1st TO 15th 16th TO 31st NOVEMBER 1st TO 15th



INVESTIGATIVE DIVISION - BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE

LABORATORY EVIDENCE - IDENTIFICATION
SECTION

EXHIBIT - 100-100000-100

LABORATORY EVIDENCE - IDENTIFICATION
SECTION

100

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10000

Dr. A.R. Rao has partaken in the Small-Pox Workers Conference held at New Delhi sponsored by the Director General of Health Services. He has also attended the Sub-Committee Meeting on Small-Pox sponsored by the Director, Indian Council of Medical Research at New Delhi.

The Medical Officers from different Nations of the World either have had their training in the diagnosis and treatment of Small-Pox or visited this Hospital throughout the year by turns.

2. DISPENSARIES

One of the essential duties of Health Authorities is providing of Free Medical Aid to the Citizens, to keep them always free from diseases. Year after year the Corporation is increasing the Medical Aid by opening new dispensaries wherever they are essential and possible. During the year 1964, one new dispensary was opened in the north, i.e., 32nd Division, Sharma Nagar. All the above dispensaries were equipped with latest equipment, drugs and medicines to facilitate quick and successful treatment. Besides the 53 General Dispensaries, Seven clinics to render specialized treatment in Leprosy and T.B. Disease, 46 Child Welfare Centres with 25 of them with Maternity wards and one Hospital for Infectious diseases were also maintained in the city. These medical institutions were regularly supplied with drugs and medicines through the Central Medical Stores maintained at Chintadripet. The specimens of blood, smears, urine, etc., of patients attending the dispensaries were analysed at the Public Health Laboratory and advised for correct diagnosis and treatment.

Out of seven Special clinics, two of them are specialized for leprosy and remaining five for T.B. Clinics. Four T.B. Clinics were attached to the State Hospitals and were placed under the supervision of the Director, Madras T.B. Institute and Clinics. As usual, drugs, medicines, equipment and accommodation for the clinics were provided by the State whereas the establishment charges were met from the Corporation funds. The Venereal Clinic at 82/83, Strahans Road, Perambur was converted into Allopathic Dispensary.

The location of the Special Clinics in the city is furnished below:—

1.	Leprosy and Skin Clinic	..	Ice House Road.
2.	Do.	..	Vyasarpady.
3.	Tuberculosis Clinic	..	Pulianthope High Road.
4.	Do.	..	Government General Hospital.
5.	Do.	..	Government Stanley Hospital.
6.	Do.	..	Government Rayapettah Hospital.
7.	Do.	..	Government Kasturba Gandhi Hospital for Women and Children, Triplicane.

3. SPECIAL CLINICS

Skin and Leprosy Clinic

Ice House Road, Triplicane

Leprosy Clinic, Dr. Beasant Road, Madras-5 functioned daily between 7-30 A.M. and 1 P.M. except on Mondays as an out-patient Department.

There was no change in the staff of the clinic which consisted of a Medical Officer, Dr. K. Venkataramana Rao, Health visitor, Pharmacist, a male and a female dressing orderly.

The Clinic is mainly intended to cater to the public residing in the divisions of South Madras, many cases come from the neighbouring villages to this clinic, to get better treatment. But unfortunately their stay in the city was as short as 24 hours, and as such nothing useful could be done to them. However each Muffusil patient is issued with an out-patient ticket with full diagnosis and line of treatment, etc., and is advised to get treated at the nearest hospital or clinic or Leprosy Mobile Unit.

Apart from treating the general public, the clinic spent a good deal of time in treating school children studying in various Corporation schools. As children are highly susceptible to Hansens and as the control of Leprosy among children largely contributes towards the eradication of Leprosy, special attention was paid to the treatment of afflicted children.

The Medical Officer was also required to advise the Superintendent, Corporation Special Home, in the matter of examination and treatment of Leper inmates.

Even though it was really gratifying to note that the public have become Leprosy conscious that they were a decade ago, the problem of absencedi amongst the patients is still great. Most of the absentee patients had only early signs of Neural or Lepromatus Leprosy and it was really a job to make them understand the necessity of early and regular treatment.

Medical Officer and Health Visitor visited the houses of some of the patients round about the clinic, and advised them regarding general hygeine treatment, etc.

4,630 New patients sought the opinion and advise of the clinic during the year. Out of them 348 were found to be Hansen cases and the rest were suffering from various other skin conditions. The total number of open cases detected was 83.

In addition to the 348 new Hansen cases registered during the year, 505 cases of Hansens registered during the previous years also attended the clinic for treatment.

33,334 old cases were attended to, the grand total of all patients who attended the clinic during the year was 37,964. The daily average attendance was 121.

235 children with skin lesions studying in various Corporation schools were sent to the clinic for diagnosis and treatment. Out of them 29 children manifested definite signs of Hansens and 74 children were kept under observation. 182 children registered in previous years also attended the clinic for treatment.

STATEMENT 'A'

New cases treated			Total cases treated			Average daily attendance		
Men	Female	Children	Men	Female	Children	Men	Female	Children
1,218	876	2,536	15,590	9,225	8,519	54	32	35
4,630			33,334			121		

CLASSIFICATION OF HANSEN CASES 1964

L	N	NL	Total
83	263	3	348

NEW SCHOOL CHILDREN IN 1964

Name of School	Male Children				Female Children				Grand Total
	Hansens	Observation	Otherwise	Total	Hansens	Observations	Otherwise	Total	
Narayanaswamy Thottam ..	7	7	6	20	3	3	9	15	35
Nochikuppam ..	..	3	6	9	..	..	1	1	10
Bazzar Road, Mylapore ..	1	..	5	6	1	16	11	28	34
Kodampakkam ..	1	5	13	19	..	..	..	..	19
Thousand Lights ..	1	..	2	3	1	1	20	22	25
Pudupet, Royapettah ..	1	1	1	3	..	2	1	3	6
Vannia Teynampet ..	..	..	3	3	1	1	..	2	5
Venkatarangam Pillai Street ..	5	11	12	28	..	..	..	..	28
Lalitha Nagar ..	..	..	8	8	..	1	1	2	10
Damodhar School, Teynampet ..	3	6	13	22	..	1	..	1	23
Pudupakkam ..	..	..	..	..	2	5	5	12	12
Bangaru Naicken Street ..	..	..	..	..	..	5	7	12	12
Dr. Besant Road ..	1	2	..	3	1	3	9	13	16
	20	35	69	124	9	38	64	111	235

LEPROSY CLINIC, VYASARPADY

I. Location:

This Clinic is located in Hope Lodge, 22, Gantz Road, Vyasarpadi, Madras-12.

Municipal Division No. 32.*II. Working Hours:*

The Clinic worked from 7-30 A.M. to 1 P.M. on all working days in the week except on Mondays.

III. Staff:

The staff consisted of a Medical Officer, Dr. Sarangapani, one Health Visitor, two Pharmacists, one female and a male Ward Attenders besides a Peon and a Sweeper.

IV. Object:

Although this Clinic is mainly intended for the services of the population residing in the North Madras City area, patients attending it from adjoining divisions of South Madras area and Mofussil and sub-urban areas have also been served during the period of this report.

*V. Particulars of Patients treated during the year 1964, in the Clinic as follows:**1. Statement of the attendance at the Clinic during the year 1964:*

(1) Number of cases registered during the year 1964 ..	4,821
(2) Number of Hansen cases among newly registered cases ..	318
(3) Number of skin and other cases among newly registered cases ..	4,503
(4) Number of Hansen cases treated ..	11,782
(5) Number of old skin and other cases treated ..	5,198
(6) Number of old skin and Leprosy cases treated ..	16,980
(7) Number of total cases treated during the year old and new together ..	21,777
(8) Daily average attendance old and new together ..	69

2. Statement showing the Hansen cases registered and treated during the year 1964.

		<i>New</i>	<i>Old</i>
Men ..	168	7,186	
Women ..	79	2,471	
Children ..	71	2,125	
Total ..	318	11,782	
Grand Total ..	12,100		

3. Statement showing the classification of new Hansen cases registered during the year 1964.

<i>Lepromatus Leprosy</i>			<i>Neural Leprosy</i>		
(i) Macular ..	21		(i) Maculo Anesthetic ..	115	
(ii) Infiltrative ..	13		(ii) Tuberculoid ..	95	
(iii) Nodular ..	6		(iii) Anaesthetic ..	14	
	—		(iv) Muscular Paralysis ..	15	
	40		(v) Perforating Ulcers ..	33	
	—		(vi) Necrosis and Absorption of bone ..	6	
			Total ..	278	
Grand Total ..	318.				

4. Statement showing skin cases registered and treated during the year 1964.

		<i>New</i>	<i>Old</i>
Men ..	783	1,526	
Women ..	843	1,493	
Children ..	2,872	2,179	
Total ..	4,503	5,196	
Grand Total ..	9,699.		

Locality Pulianthope area	Total population enumerated			Total population examined			Total	Leprosy cases detected			Total	Infective	Non-infective	Total
	M	W	Male Fem.	M	W	Male Fem.		M	W	Male Fem.				
Parthasarathy Naidu Street ..	416	481	238	218	1,353	370	199	1,133	..	1	..	1	..	1
Veera Chetty Street ..	183	203	111	110	707	153	95	539	1	2	..	3	..	3
Ponnappa Street.	146	150	79	77	452	98	66	360	..	..	1	1	..	1
Vaithiar Velu Street ..	18	14	1	3	36	12	3	27	..	..	..	..	..	..
Krishna Pillai Street ..	96	79	50	52	277	80	40	232	..	..	1	1	..	1
Gray Nagar Ist and IIInd Streets	116	127	82	91	416	107	78	266	..	1	..	2	..	2
	975	1,054	661	552	3,141	894	481	2,547	1	3	1	3	..	8

65

Preventive Measures :

New Leprosy cases registered for treatment during this period were explained the nature of illness, its progress and method of propagation. They were given practical advice regarding preventive measures such as (1) avoiding intimate contact with young children (2) regular attendance for treatment (3) and avoiding of injuries to hands and feet during routine performance of their daily duties by being careful in their performance.

Exercises for minimising the hazard of deformity and disability were demonstrated to them for their observance. 3,733 dressings were made during this year for the ulcer of Leprosy patients.

5. *Statement showing the classification of new skin cases registered during the year 1964.*

(i) Vitamin deficiency	..	997
(ii) Allergic disorders	..	769
(iii) Scabies	..	442
(iv) Infections of skin	..	1,898
(v) Other general conditions	..	397
Total	..	<hr/> 4,503 <hr/>

Treatment:

The main treatment for Leprosy cases during this period has been administration of oral Sulphone Tablets with "DAPSONE" brand of D.D.S. tablets and subcutaneous injections of Hydrocarpus remedies.

TUBERCULOSIS CLINIC, PULIANTHOPE

Tuberculosis Clinic Pulianthope situated at No. 13, Pulianthope High Road, Madras-12, complete its 20th year of service by November 1964. Dr. Selvapathi, continued to be the Medical Officer in charge of the Clinic.

This institution run by the Corporation of Madras, serves the need of the people from the following areas (a) Sembium (b) Perambur (c) Vyasarpadi (d) Pulianthope (e) Choolai (f) Kosapet (g) Otteri (h) Ayanavaram.

The Clinic is fully equipped both for the diagnosis and treatment of Tuberculosis Patients.

Patients under the Clinic's preventive control area treated as out-patients till the time they get admission to Government, T.B. Hospital, Otteri and their treatment and follow up are continued after discharge from the Hospital.

The Clinic works with close co-operation of Tuberculosis Chemotherapy Centre, Egmore. Fresh cases are referred to this centre for research work and domicilliary treatment.

In this year we added one miniature X-Ray Unit and one 200 M.A. X-Ray Plant to the X-Ray Department of this Clinic. For the dark room also one refrigerated X-Ray Developing Unit is added.

Necessary Funds were allotted to expand the Clinic Building on the eastern side. This will have one O.P. Counter, a large waiting hall, and injections room and a room for A.M.O., and a Laboratory. Necessary steps are being taken to implement the proposal early.

Table 'A'

Showing the number of cases examined and the non P.T. cases among them during the year 1964.

No. of cases examined	..	..	8,193	..	..
No. of cases diagonised as P.T.	..	..	..	..	756
No. of cases diagonised as T.B.	..	..	..	..	45
Total diagonised as Tuberculosis	..	..	..	..	<hr/>801 <hr/>

Table "B"

Showing the daily average attendance during the year 1964.

<i>Year</i>	<i>Daily Average</i>
1961	131
1963	131
1964	125

Table "C"

No. of Sputum examined	..	5,877
No. of Injections given	..	15,320
No. of Aspitations done	..	11
Contact examination done	..	1,251
Remarks on contacts	..	..
P.T. I	..	3
P.T. II	..	..
P.T. III	..	5
Normal	..	1,243
Visits of Health visitors: New	..	676
Old	..	1,849
Hospital discharged	..	348
		<hr/>
Total	...	2873
		<hr/>
Radiography	..	4,035
Fluroscopy	..	3,234

Number of patients who had Chemotherapy at Clinic.

<i>Year</i>		<i>New Cases</i>	<i>Old Cases</i>	<i>Followed</i>
1962	..	429	380	809
1963	..	502	297	799
1964	..	619	448	1,067

Total number of patients who had Chemoprophy laxis for the year 1964 : 219.

Table "D"

Attendance at the clinic in the year 1964.

<i>Male</i>		
New	..	3,465
Old	..	16,443
<i>Female</i>		
New	..	2,816
Old	..	14,912
<i>Male Child</i>		
New	..	1,067
Old	..	3,899
<i>Female Child</i>		
New	..	845
Old	..	2,121

Total New	..	8,193
Total Old	..	37,375
Grand Total	..	45,568
Daily average	..	125

Table "E"

P.T. I	..	18
P.T. II	..	23
P.T. III	..	715
Total P.T.	..	<u>756</u>

Tuberculosis of other organs	..	45
Coryza	..	51
Influenza	..	54
Pneumonia	..	17
Heart Disease	..	15
Bronchitis	..	4,413
Br. Asthma	..	850
Bronchiectasis	..	78
Bosonophil Lung	..	10
Tonsillitis	..	3
Pleurisy	..	12
Wh. Cough	..	6
Myalgia	..	621
N.Y.D.	..	159
N.A.D.	..	655
Other diseases	..	448
Total	..	<u>8,193</u>

Table "F"

Positive cases according to places for the year 1964.

Pulianthope	..	108
Choolai	..	101
Kosapet	..	120
Perambur	..	82
Vyasarpadi	..	49
Sembium	..	24
Ayanavaram	..	29
Total	..	<u>513</u>

Cases referred to	T.B. Institute, Egmore	..	155
"	T.B.C. General Hospital	..	28
"	T.B.C. Stanley Hospital	..	56
"	T.B.C. Royapettah Hospital	..	4
"	T.B.C. K.G. Hospital	..	..
	Total	..	<u>756</u>

No. of cases referred to Chemotherapy Centre : 305.

Table "G"

Positive cases according to ages for the year 1964.

Years	0-5	..	6
	6-10	..	13
	11-15	..	30
	16-20	..	90
	21-25	..	142
	26-30	..	126
	31-35	..	84
	36-40	..	87
	41-45	..	56
	46-50	..	56
	51-55	..	28
	56-60	..	26
	60 and above	..	12
	Total	..	756

Table "H"

Nationality and sex of the positive cases for the year 1964.

	Hindus	..	658
	Muslims	..	61
	Christians	..	37
			756
	Male	..	440
	Female	..	200
	Children	..	116
	Total	..	756

Table "I"

Returns and Statement for the year 1964.

No. of cases	..	8,193
No. of open cases	..	756
No. of Tuberculosis of other organs	..	45
No. of old cases	..	37,375
No. of aspiration	..	11
No. of injections given	..	15,320
No. of cases visited in the homes by health visitors	..	2,873
No. of contacts examined at the clinic	..	1,251

Table "J"

Types of Tuberculosis Diseases treated for the year 1964.

Pulmonary Tuberculosis	..	756
Tuberculosis of glands	..	33
Tuberculosis of Bones and Joints	..	1
Abdominal Tuberculosis	..	1
Meningeal Tuberculosis	..	..
Tuberculosis of skin	..	1
Pleurisy Dry	..	4
Pleurisy with effusion	..	8
Total	..	804

Table "K"

Classification of patients according to income for 1964.

Rs.	Nos.
5-15	58
16-25	85
26-35	159
36-45	153
46-55	84
56-65	76
66-75	46
76-85	45
86-95	24
96-100	18
100 and above	8
Total	756

**Chest Clinic (Tuberculosis), Government
General Hospital, Madras-3.**

Chest clinic (Tuberculosis) Government General Hospital, Madras functioned daily between 2 and 5 P.M. except Sundays at the out-Patient Department.

Staff:

Director of Tuberculosis Institute and Clinics, Chetput, Madras.
One Medical Officer.
One House Physicians (change every month)
Two Health Visitors.
One Staff Nurse.
One Clerk.

Facilities Available:

Screening, X Ray, Laboratories, etc. There is a ward of eighteen beds (12 for males and 6 for females) attached to the clinic. Emergency cases of Pulmonary Tuberculosis like Haemoptysis, spontaneous pneumothorax, etc., were admitted to this ward.

Hours of Work:

Daily routine 8 to 11 A.M.

Health visiting by Medical Officer and Health Visitors.

11 A.M. to 1 P.M. Ward work by the Medical Officers and House Physicians 2 to 5 P.M. Out-patient work by Medical Officer and House Physicians. All the staff members attended regularly.

All cases coming to the out-patient department were registered their addresses noted correctly and examined thoroughly screened X Ray and Laboratory investigations done. Diagnosis of Pulmonary Tuberculosis were made in the register maintained. Treatment was advised and started. All cases fit for Sanatorium treatment were selected every week and shown to the Director on Tuesdays and their names were put in the waiting list for

admission to Government Tuberculosis Institute, Chetput. Intimation for admission were sent direct to the patient by the Superintendent, Government Tuberculosis Sanatorium, Tambaram as and when vacancies arisen.

Some of the E.S.I. Patients were also directed here to get opinion and advise for treatment. They were periodically sent here for check up and advice.

Total number of cases registered at the clinics.

Males	..	2,333
Females	..	952
Children	..	78
Total	..	<u>3,363</u>

Daily average attendance .. 9

Number of Pulmonary Tuberculosis cases in the above:

P.T. I	Males	..	8
	Females	..	5
	Children	..	1
			<u>14</u>
P.T. II	Males	..	4
	Females	..	1
	Children	..	..
			<u>5</u>
P.T. III	Males	..	1,452
	Females	..	537
	Children	..	2
			<u>1,991</u>

Number of open cases in the above .. 1,991.

Number of non-pulmonary tuberculosis cases:—

Cervical adenitis	..	..
Tuberculosis hip	..	..
Tuberculosis spine	..	..
Tuberculosis knees	..	..
Tuberculosis adenitis	..	14
Lupus	..	..

Number of non-tuberculosis cases not yet diagnosed:—

Flurceys with affusion	..	28
Eosinophilis	..	..
V.D.H.	..	..
Pneumonia	..	..
Asthma	..	..
Lung Abscess	..	..
Bronchietasis	..	..

Total number of old cases attended as out-patients:—

Males	..	11,093
Females	..	6,500
Children	..	253
		<hr/>
		17,846
		<hr/>

Daily average attendance	..	49
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Number of inpatients treated:—

Males	..	590
Females	..	230

Treatment:

All new cases were physically examined and screened in addition to sputum and blood examination. X Ray chest was taken for diagnostic and treatment purpose. All acute cases get streptomycin 1 gm. 1 M. daily with 1 NH 200 mgms. daily for a month and re-xrayed to assess improvement. Suitable cases were put on the waiting list for admission to Tambaram Sanatorium, Collapse therapy was almost abandoned and only suitable cases were sometimes tried for A.P. Some cases returned to the clinic for P.P. after discharge from Sanatorium for continuance of P.P. Latest treatment of Special medicine bi-weekly with 1 NH. 650 gms. have been tried from May, 1963. Defaulter controls are mostly checked and given treatment regularly with advice to attend regularly and treatment to be continued for one year without interruption.

Emergency admissions into the Tuberculosis ward were done by Casualty Medical Officer was also same cases were transferred from Medical Units, if sputum is positive and their conditions did not permit for discharge to attend out-patient clinic. As soon as the emergencies were over they were advised to attend to their respective clinics where they were living.

All most all patients belonging to the area of the clinic were given free antibiotics daily and some chronic patients get tablets every week.

Check up for inpatients:

All patients discharged from Tuberculosis Sanatorium residing in the surrounding area reported to the clinic for periodical check up which consisted of sputum and blood examination, X-Ray, Chest and Physical Examination, etc. The period of check up varied from 3 to 6 months depending on individual cases. This had helped in early detection of relapses and immediate institution of treatment.

Streptomycin.
Para Amine Salicylic acid (P.A.S.)
Isotonic hydrexide (I.N.M.)
Tablet fan.

The drugs are widely used and were given free to poor patients as out patient.

Collapse Therapy:

A.P. and P.P.		
A.P.	..	Nil
A.P. refill	..	Nil
No. of patients attended for A.P.		
Refills	..	Nil

Pneumoperitoneum:

Number of P.P. initial	..	Nil
Number of P.R. refills	..	Nil
Number of patients attended P.P. Refills	..	Nil

Contact Examination:

Health Visitors and Medical Officers visited the houses of patients in the surrounding areas of the clinic noted below;

1. Chintadripet,
2. Periamet.
3. Park Town.
4. Edapalayam.
5. Travelayan Basin.
6. Sowcarpet.
7. Kothwal Bazaar.
8. Kachaleeswarar Agraharam.
9. Napier Park.

Advices were given regarding isolation of patients and disposal of sputum in the houses. All contacts were examined, screened and X ray if necessary. Some of the contacts were advised to have Montoux test for ruling out tuberculosis.

Advice in Family Planning was also given.

Total Number of houses visited by Medical Officer....480.

Total Number of houses visited by Health Visitors.

First visit	..	720
Revisit	..	730
		<hr/> 1,450 <hr/>

Number of contacts examined in the Clinic:

Males	..	170
Females	..	120
Children	..	80
		<hr/> 370 <hr/>

Number of P.T. Cases found among contacts:—

		P.T. I	P.T. II	P.T. III	Total
Males	..	Nil	Nil	10	20
Females	..	Nil	Nil	10	..
Children	..	Nil	Nil	..	..
				<hr/> 20 <hr/>	

1.	Area covered by 23,572 sq. miles :		
	Number of divisions catered	..	9
2.	Population catered to	..	1,84,712
3.	Number of pulmonary tuberculosis cases :		
	Positive	..	1,991
	Negative	..	19
4.	Number of non-pulmonary tuberculosis	..	42
5.	Number of non-tuberculosis cases	..	1,310
6.	Total daily average attendance	..	58

Tuberculosis Clinic, Government Stanley Hospital, Madras.

The Stanley Tuberculosis Clinic presently called as Chest Clinic functioned between 1-30 P.M. and 5 P.M. on all days except Sundays. The staff consisted of a Medical Officer, two Health Visitors, a Staff Nurse, a female Nursing orderly and a male nursing orderly. The clinic had been supervised on every Monday in a week by the Director, Chest Institute, Chetput, Madras. The Dean of the Hospital had the administrative control over the Clinic.

On an average 25 new cases and 200 old cases attended the clinic every day. All the new cases were examined on the same day. Sputum examination, Blood examination and screenings were done on the next day. Sputum positive cases, which were suitable for admission into Tuberculosis Sanatorium at Tambaram and also into the Thiruvateeswaran Tuberculosis Hospital, Ottery, Madras were put up before the Director on every Monday for his recommendation and these cases were put on the waiting list maintained at the Chest Institute, Chetput, Madras. N.G.Os. were placed in a separate waiting list by the Chest Institute, Chetput, Madras. Among the Government servants, Police and Ex. Servicemen were given priority. Pregnant women suffering from Pulmonary Tuberculosis were given immediate admission into one of these above mentioned Sanatoria. Other cases of proved Pulmonary Tuberculosis were treated on domicillary lines at the Clinic as out patient. As far as possible bilateral advanced cases were isolated at the homes of the patients and looked after by the Medical Officer and the Health Visitors periodically.

The Medical Officer and the Health Visitors made house visits to the patients residence every day other than Sundays and Holidays. In this connection the defaulters were paid special attention. Advice was given to the patient about disposal of the sputum keeping separate tensils and its cleanliness, etc. Elementary things like modestic higiene, such as to keep the doors and windows open, sputum disposal, keeping away from their children, etc., and also the domestic economy such as how to prepare simple nourishing diet, etc., were taught by the Health Visitors in the patients houses. Contact of the patients were brought to the clinic for check up by the Health Visitors. For Mantoux tests, patients were directed to Ashok Vihar and Peadiatric out patients department, Stanley Hospital, Madras. Screening of the contact cases which showed active leasion were also put in the waiting list and treatment started in the clinic straight away. Family Planning advises were given to the patients by our Health Visitors.

At the clinic anti-tubercular drugs like Streptomycin, P.A.S., I.N.H. Tubafon and Unithiben were given free to all patients till they show satisfactory improvement. Dean of the Hospital was the sanctioning authority for the anti-Tubercular drugs dispensed at the clinic for the out patients. Financial assistance was rendered to the poor patients by 'Bhava Nagar Kshyayaroga' fund by giving 10 Rupees per month. The clinic was provided with 6 beds (3 beds for men and 3 for women) at T.B. Shed attached to the Grey Ward of this Hospital for admission of the emergency cases with hmemop-tysis, dyspnoea and oedema feet, etc.

During the year 1964, Dr. Merciner from National Tuberculosis Institute, Bangalore paid a visit to our clinic and suggested some improvements in the maintenance of the Statistical datas and about the classification of cases with Tuberculosis.

D.T. Statement showing the patients treated for Tuberculosis in the T.B. Clinic, Government Stanley Hospital for the year 1964.

	<i>New Admission</i>		<i>Out of these fresh cases</i>	
	<i>Male</i>	<i>Female</i>	<i>Children</i>	<i>Total</i>
1. Tuberculosis of the Respiratory system (giving also separately) in fresh case the number of cases associated with occupational diseases of lung such as silicosis anthracosis, etc. ..	4,235		3,609	
2. Pulmonary ..	2,448	1,521	266	4,235
3. Other (Non-tubercular cases pulmonary and non-Pulmonary) ..	2,042			
4. Others (Fistula) ..	2,193			
5. Other Forms of Glands (Hymphatic) ..	..	..	..	139

Fresh cases means such cases who have not been treated for Tuberculosis in any other hospital and Dispensary.

Tuberculosis Clinic, Government Royapettah Hospital, Madras

Chest (T.B.) Clinic: is functioning since 1960.

Area covered	..	15.2494 Sq. Miles.
Number of Main Divisions	..	9
Population catered to	..	2,23,489 (Old census).

Staff attached to the Clinic:

1. Medical Officer .. One
2. Qualified Health Visitor .. Two
3. Registration Clerk (Part time) .. One
4. The Chest (T.B.) Clinic takes the services of the Staff attached to the Government Royapettah Hospital X-Ray Department and clinical Laboratory for X-Raying and Laboratory examination respectively.
5. The Staff Nurse posted to the T.B. Ward is also posted to work in the Clinic in the afternoon.
6. The Male Nursing Orderly and Female Nursing Orderly posted to the Clinic are part time workers who have other duties in the other departments of the Government Royapettah Hospital.

The work done by the Chest (T.B.) Clinic Staff may be summoned up as follows:—

Main Items:

1. Contact work including default checking.
 2. Tuberculosis Ward work (In-patient).
 3. Chest (T.B.) Clinic work (Out-patient).
- (1) *Contact Work*:—Between 8 A.M. and 11 A.M. All contacts of open cases are queried at their houses and a thorough check up is given at the clinic. For the year ending 1964 the number of new cases picked up (i.e. open cases) is 317 and details of contact coverage are mentioned in the attached sheets. Further the homes of P.T. Cases who fail to turn up at the clinic for regular Chemotherapy, are also visited. This helps to keep a check on the defaulters.
- (2) *Tuberculosis Ward work*:—(In-patient)—P.T. Cases grouped under emergency cases (i.e. having haemoptysis, Dyspnoea from causes like spontaneous pneumothorax, Dydro-Pneumothorax, Pleurisy with Massive effusion, Empyema, Ascites, Extensive Bilateral lesion with dyspnoea and cases in a moribund state) are admitted in the T.B. Ward attached to the Clinic and treated till the emergency is over. On discharge the patients are advised to attend their nearest Chest (T.B.) Clinic.

Patients admitted in the T.B. Ward come through:

- (1) The Government Chest Institute, Madras-31.
- (2) The Government Royapettah Hospital, Chest (T. B.) Clinic, Madras-14.
- (3) The Government Royapettah Hospital, Casualty Department; and
- (4) From other Units of Government Royapettah Hospital by way of transfers.

Bed Strength:

18 beds (sanctioned, and 6 extra.
(Admission is only for men, as there is no provision for women and children).

Working Hours: 12 A.M. to 1 P.M.

Number of emergency cases with P.T. admitted for the year 1964	..	834
Deaths	..	48

3. *Chest (T.B.) Clinic (Out-patient Department).*

Working Hours: 2 P.M. to 5 P.M.

Though this clinic is intended to cater to the divisions mentioned above, men patients from Triplicane (i.e. K.G. Hospital area) are also examined and treated at this clinic.

New patients coming by mistake or otherwise from areas other than that pertaining to this clinic are also examined and referred to the respective clinics in the City.

Only patients referred from other Units of the Government Royapettah Hospital are taken in at the Clinic for Registration, investigation, treatment, etc.

Cases which do not belong to this clinic preventive control area, are not registered but referred to other respective chest clinics. Similarly temporary residents including Mofussil patients are not registered but referred to the Government Chest Institute, Madras-31. (However, if these cases needed emergency treatment with hospitalisation, they are registered and admitted in the T.B. Emergency Ward of the Hospital).

Hence the number of new cases registered at this chest clinic is small.

1.	Number of cases registered in the year 1964	..	1,284
2.	Number of P.T. Cases among New cases for 1964	..	591
3.	Number of Non-Pulmonary T.B. Cases for the year 1964	..	46
4.	Total number of New T.B. cases for 1964	..	637
5.	Number of Old T.B. cases registered in 1964	..	85
6.	Number of Non-Tuberculosis cases in 1964	..	562
7.	Number of Old T.B. Cases treated in 1964	..	425
8.	Attendance:—Number of old cases in 1964	..	26,713
9.	Daily average attendance of old cases	..	86
10.	Daily average attendance (old and new)	..	91

For the year 1964:

(a)	A.P. Initials	..	Nil
(b)	A.P. Refills	..	Nil
(c)	Number of patients attending for A.P.	..	Nil
(d)	P.P. Initials	..	Nil
(e)	P.P. Refills	..	27
(f)	Number of patients attending for P.P. Refills	..	2
(g)	Number of aspirations	..	2
(h)	Number of deflation	..	1
(i)	Number of screenings	..	450
(j)	Number of streptomycin injections	..	14,221
(k)	Number of patients put on waiting list for admission into Sanatorium	..	235
(l)	Number of cases referred from other clinics	..	36
(m)	Number of cases referred to other T.B. clinics	..	44

Number of screenings: is small since screening is not done for every case.....
Only when the X-Ray Plant is out of order or there is film shortage, and in certain number of patients where screening is also necessary for investigation, patients are subjected to Fluoroscopy.

From the statistics for the year 1964, it is seen that the incidence of Pulmonary Tuberculosis is at its zenith in the age group between 16 and 45, and in the same group the incidence is highest in the male sex.

In the occupation group, the incidence is high in coolies.

Housewives.
Hotel Employees.
Beedi Rollers.
Tailors.
Ryots and the unemployed.

Further details are mentioned in separate sheets attached.

Remarks:

In considering the problems of control of tuberculosis, three main things are to the borne in mind.

- (a) the patients.
- (b) their environmental factors; and
- (c) facilities for early detection and therapy.

The Association between adverse social conditions with regard to nutrition, living standards, and working conditions is well known.

Improved housing conditions, leading to a reduction in the number, dosage and closeness of contact is an important factor in improving social conditions.

The Tuberculosis control movement revolves round the patient.

He is the victim on whom the real burden of the disease falls. It is the improvement of his plight and trying to keep others from undergoing his ordeal, that give meaning to control efforts.

Treatment cannot be said to be complete until the patient is ready to return to useful and satisfying living.

Raising the standard of living results in improved well-being, improved housing, nutrition, cleanliness and sanitary conditions and the raising of the standard of education and general social security are factors which contribute to a decline in Tuberculosis.

The general measures help to a certain point. But a regular Anti-tuberculosis campaign including the measure of protection of the uninfected population by inoculation with B.C.G. that contributes to help the decline in the incidence of Tuberculosis.

To divorce specific measures from General measures, will add to the difficulty in the control of Tuberculosis.

With the launching of the all out National Tuberculosis Control Programme to eradicate Tuberculosis, the present trend is to lay stress on Domicillary treatment and defaulter checking which includes convincing the patient as to why he should be regular in attending the clinic for Chemotherapy, check up, etc.

The patients attending this clinic are really poor who fall in the occupation groups viz:

- Coolies.
- House wives.
- Beedi Rollers.
- Tailors.
- Ryots.
- Weavers.
- Street Hawkers.

Hotel Servants, and the large group of unemployed whose standard of living is far below the average.

Drug Supply :

The drug supply to the patients attending this clinic is drawn from the Medical Stores attached to the Government Royapettah Hospital.

This report will be incomplete if mention is not made of the morning Part Time Clinic which is functioning since 9-8-1963. With the upgrading and redesignation of the Government T.B. Institute into Government Chest Institute, and Tuberculosis Demonstration and Training Centre, Madras-31. One Medical Officer was deputed to start a Morning Clinic at the G.R.H. Chest Clinic premises, to deal with certain number of old T.B. patients who are being transferred to this clinic from the Government Chest Institute since 9-8-1963.

On 20th February 1964 the T.B. (Emergency) Ward was handed over to the Morning Chest Clinic Medical Officer and so the Medical Officer in charge of the full time T.B. Clinic functioning in the afternoon has been relieved of his duties in the Ward since that date.

Sheets attached :

- (a) Clinical coverage in detail for the year 1964.
- (b) Age, sex, income, occupation-war of cases diagnosed as P.T. for the year 1964.
- (c) Contact coverage for the year 1964.

“ A ”

**Government Royapettah Hospital Chest (T.B.) Clinic, Madras-14—1964.
(Functioning since 1950)**

1. Area covered	..	15.2494 Sq. Miles.
2. Number of divisions	..	9 Divisions: Royapettah, Mylapore North, Mylapore South, Vellala Teynampet, Vannia Teynampet, T. Nagar South, T. Nagar North, Guindy, Adyar.
3. Population catered to	..	2,23,489 (old census).
4. Number of new cases registered		
	Men	.. 822
	Women	.. 376
	Children	.. 86
	Total	.. <u>1,284</u>
5. Daily average attendance of New cases ..		5
6. No. of pulmonary Tuberculosis cases		
	(New) Sputum Positive	.. 317
	Sputum Negative	.. 274
	Total	.. <u>591</u>

P.T. I			P.T. II			P.T. III			
Men	Women	Children	Men	Women	Children	Men	Women	Children	Total
13	24	21	117	40	4	281	91	Nil	591
7. Number of non-pulmonary Tuberculosis Cases									46
8. Number of non-tuberculosis cases									562
9. Number of old cases (attendance at the clinic) :									
						Men	..		17,526
						Women	..		7,864
						Children	..		1,323
						Total	..		26,713
10. Daily average attendance of old cases									86
11. Total daily average (new and old cases)									91

“ B ”

Government Royapettah, Madras Chest (Tuberculosis) Clinic—Madras-14.

(Age, sex, occupation and income groups of cases diagnosed to be suffering from Pulmonary Tuberculosis for the year 1964).

Age Group	P.T. I		P.T. II		P.T. III		Grand Total
	Men	Women	Men	Women	Men	Women	
1 — 5	8	5	1	Nil	Nil	Nil	
6 — 10	4	4	1	2	Nil	Nil	
11 — 15	Nil	5	2	2	1	3	
16 — 25	2	8	38	15	73	35	
26 — 35	7	7	29	15	69	33	
36 — 45	4	2	16	4	51	10	
Above 45	Nil	2	32	4	87	10	
Total	25	33	119	42	281	91	591

Income group cases
Income

	<i>No. of cases</i>	<i>Total</i>
1 to 9	Nil	
10 to 20	..	20
21 to 40	..	232
41 to 75	..	246
76 to 100	..	51
above 100	..	18
Unemployed	..	24
		591

Occupation Group

Artist	1	Electrician	5	Nurse	1
Barber	2	Electro plater	1	Packer	2
Baker	2	Fisherman	6	Peon	11
Beedi Roller	25	Gardner	3	Painter	6
Bill Collector	2	Goldsmith	6	Police constable	2
Binder	3	Glue Worker	1	Pensioner	3
Business man	3	Hotel server	27	Priest	1
Butler cook	7	Tea employee		Provision store	
Blacksmith	1	Hawker	7	employee	1
Carpenter	8	Helper	1	Pandal maker	1
Cane worker	1	Housewife	107	Potter	1
Cobbler	5	Domestic servant	3	Ryot	20
Compositor	6	Laundry worker	2	Rickshaw puller	4
Clerk	9	House owner	3	Salesman	10
Cleaner	3	Male Nursing		Sweeper	9
Conductor	1	orderly	2	Sweet meat maker	2
Cooly	132	House broker	1	Student	21
Dhoby	4	Milkman	8	Tailor	22
Driver	13	Mechanic	9	Teacher	4
Drain cooly	1	Mason	9	Unemployed	24
Dyer	1	Moulder	1		
Watchman	8	Weaver	6	Total	591

“ C ”

**Government Royapettah Hospital Chest (T.B.) Clinic Contact Coverage
for the year 1964**

1.	Patients picked up (open cases)	..	317
2.	Number queried at Home	..	637
3.	Number of House visits including defaulter checking	..	1,334
4.	Number of contacts totally examined at the clinic	..	125
5.	Number of P.T. cases found among Contacts:		
	P.T. I	..	15
	P.T. II	..	13
	P.T. III	..	10
	Total number of P.T. Cases found among the contacts	..	38

**Tuberculosis Clinic, Kasturba Gandhi Hospital for Women and
Children, Triplicane, Madras.**

The T.B. Clinic attached to the above hospital functions on all days except Sunday from 2 P.M. to 5 P.M. Triplicane, Zambazaar Pudupakkam, Tiruvatteeswaranpet, Mount Road, Chepauk, Mirsahibpet and Krishnampet are under the jurisdiction of this clinic. Only women and children are treated and contact cases are examined. Male contacts are screened and if found positive are referred to General or Royapettah Hospital.

The Director, Tuberculosis Institute supervises the clinic once a week and puts deserving patients suffering from Pulmonary Tuberculosis on waiting list for admission into the Government Tuberculosis Sanatorium, Tambaram. A specially trained doctor and an house surgeon attend the

patients and also examine the in-patients when requested by the Ward Doctor and give necessary advice. The doctor and a Health Visitor visit the patients in their homes and give them necessary advice regarding the disposal of sputum, contact examination, attending the hospital regularly, health, etc. When patients of this area happen to visit other clinics, they are referred back to this clinic. The health visitor visits them and advises them to visit the clinic. The clinic functions only as an out-patient department.

The year under review 2,702 new patients attended the clinic. All clinical examinations are being done in the hospital, clinical laboratory, screening and X-ray apparatus is made use of. Most of the patients are P.T. III cases, majority of them being between the ages 16 to 25 years, their income being between Rs. 21 to Rs. 40 and their occupation housewife.

Deserving patients are receiving money from the Bhavanagar Fund. They are paid Rs. 10 per month for a period of six months.

1964

1.	Area covered by 6 divisions	..	2,885 Sq. miles.	
2.	Population catered to	..	1,79,303	
3.	Number of new cases registered	Women	.. 1,814	} 2,702
		Children	.. 888	

Daily average attendance of cases — 9 cases.

4.	Number of Pulmonary Tuberculosis cases :	..	P.T. I	P.T. II	P.T. III	Total
	Women	..	49	27	169	} 339
	Children	..	72	3	19	

Sputum positive cases 84.

5.	Number of non-Pulmonary Tuberculosis cases	..			338
6.	Number of Non-Tuberculosis cases	..			2,002
		Women	Children		Total
7.	Number of Old cases	..	15,721	6,806	22,527
8.	Daily average attendance of old cases	..	62		
9.	Total daily average attendance	..	71		

Curative:

1.	No. of new cases (Including contacts)	..	Women	Children	Total
		..	1,814	888	2,702

2.	(i) No. of Pulmonary Tuberculosis:	..	P.T. I	P.T. II	P.T. III	Total
	Women	..	49	27	109	} 339
	Children	..	72	3	19	

	No. of cases belonging to this area	..	227	} 339
	No. of cases belong to other areas	..	94	
	No. of cases from mofussil	..	18	

(ii) Pleurisy:

	Dry	..	3
	with effusion	..	19

(iii) Others—Tuberculosis cenvicits	..	1
-------------------------------------	----	---

3.	No. of open cases in the above	..	..
4.	No. of Non-Pulmonary Tuberculosis cases	..	2,002	
	(i) Glans (Lymphatic)	..	310	} 338
	(ii) Osteoaticula (excluding late affection)	..	5	
	(iii) Menengeal (including central nervous system)	..	8	
	(iv) Abdominal	..	15	
	(v) Skin including subcutaneous)	..	..
	(vi) Of genite urinary stern	..	Nil	
	(vii) Others	..	Nil	
*5.	No. of Non-Tuberculosis cases	..	2,002	
6.	No. of old cases	..	Women 15,721 Children 6,806	Total 22,527
7.	No. of injections given—			
	Streptomycin	..	2,000	
	Other injections	..	1,000	
8.	No. of screenings done	..	2,960	
9.	No. of aspirations done	..	Nil	

Preventive:

10.	No. of cases referred from other clinics	..	187
11.	No. of houses visited by the Health visitor	..	574
	by the Medical Officer	..	500

*5. No. of Non-Tuberculosis cases.

Respiratory System :

Influenza	..	3
Upper respiratory catarrh	..	231
Laryngitis	..	1
Tonsilitis	..	73
Bronchitis	..	658
Bronchial Asthma	..	166
Cystic lung	..	9
Bosonophilia	..	40
Bronchoectosis	..	25
Broncho Pneumonia	..	..
Lung abcess	..	..
Pneumonitis	..	8
Whooping cough	..	7

Cardivascular system

Vaivular diseases of the heart	23
Hypertension	.. 5
Annemia	.. 54
Hodgekins	.. 1

Digestive system :

Dysentery	..	Nil
Diarrhoea	..	18
Nutritional oedana	..	17
Dyspepsia	..	61

Other diseases

P.U.O.	..	48
Debility	..	105
Myalgia	..	89
Surgical	..	13
Gynac	..	23
Fibrositis	..	1
Neuritis	..	1
Diabetis	..	..
Thyrotoxicosis	..	1
Nephitis	..	2

Contacts	..	320
		1,682
		2,002

	Women	Children	Total
12. No. of contacts examined in the clinic ..	75	245	320
13. Family Planning - No. Advised ..	2,00		

Age, sex and income and occupation groups among patients suffering from Pulmonary Tuberculosis for the year 1964.

Age and sex group:

Age		Females			Total
		P.T. I	P.T. II	P.T. III	
1 to 5	..	62	2	14	78
6 to 10	..	10	1	5	16
11 to 15	..	3	1	1	5
16 to 25	..	18	12	73	103
26 to 35	..	20	11	51	82
36 to 45	..	3	3	27	33
46 and above	..	5	..	17	22
		121	30	188	339

Income and occupation group:

Income		Occupation	
Rupees	No. of cases	Type of occupation	No. of cases
10 to 20	.. 32	House wife	.. 222
21 to 40	.. 156	Nil occupation	.. 91
41 to 75	.. 95	Students	.. 20
76 to 100	.. 24	Nun	.. 1
100 and above	.. 24	Servant	.. 4
Nil income	.. 8	Nurse	.. 1
	339		339

SECTION - E

SCHOOL HYGIENE



SECTION - E

SCHOOL HYGIENE

1. School Medical Inspection

During the year under review, three Medical Inspectresses and one Chief Medical Inspector continued medical inspection of school children studying in Corporation schools in the City. Out of these three lady doctors, one doctor joined duty as late in the month of March 1964 only. As usual the complement of Medical Inspection Staff was not at all sufficient to cope up with the work. As many as 330 schools are run by the Corporation and this skeleton staff was nowhere when compared to this large number of schools in the City. Often these schools doctors were posted in the Corporation Dispensaries as and when the dispensary doctors proceeded on leave. This temporary posting of the school doctors in the Corporation dispensaries, slowed down the progress of the medical inspection work of schools in the City. As the number of schools were on the increase and the number of children studying in the schools were also on the increase, the need for appointing some more school doctors was keenly felt. A proposal to appoint the Corporation dispensary Doctors, as part time medical inspection of schools, is now under the consideration of the Authorities. Out of the 330 Corporation schools, the categories of schools are noted below for information.

Total number of Basic Schools	..	9
Total number of Elementary Schools	..	134
Total number of Higher Elementary Schools	..	130
Total number of Urudu Girls Schools	..	19
Total number of Urudu Boys Schools	..	22
Total number of High Schools	..	16
		<hr/>
Total	..	330
		<hr/>

Like the previous year, only one school Ambulance van, was under the charge of Chief Medical Inspector and this Ambulance took the children of Corporation schools of South Madras to skin clinics for examination and treatment and for BCG Vaccination also. No such ambulance was available for North Madras, as the present condemned one is not yet replaced. As such the children of the schools of North Madras, could not get the benefit of the above such treatment. In addition this ambulance took the school children to Ophthalmic departments of the Government Royapettah Hospital and to Government Ophthalmic Hospital, Egmore for eye testing and provision of spectacles. During the year under review, the school doctors have examined, 11,409 school children and out of these 4,820 were found defective and the important features observed during the Medical Inspection are given below.

Malnutrition:—913 school children fall under this group and they were given shark liver oil and calcium lactate for a period of 90 days and improvement noticed in them. 124 students were found to be suffering from Rickets and the above treatment given and improvement noticed in those rickety children. 1,041 students were given yeast vitamin 'C' Iron, for cases of stomatiation and border cases of Annaemia of malnutritional origin and other forms of vitamin defeciencies.

Treatment:—3,530 students were treated in the schools itself and 422 students were referred to Corporation dispensaries for examination and treatment as they could not be attended in the schools itself. 684 students were referred to Government Hospitals for ailments like Pharyngitis, Tonsillitis, chronic discharges from the ears and also for operations like Tonsillectomy, circumcision, etc.

Revisits:—109 revisits were paid to various schools and 3,011 students were re-examined during these revisits and the parents of the defective children suitably advised regarding treatment and follow up.

Personal Hygiene:—81 children were found to be unhygienic in respect of clothing, head body, nails, etc. Instructions were given to their parents to pay more attention to the above defects and send their children in a clean condition to classes. The medical Inspection staff taught the children, the basic principles of hygiene by giving few lectures during their visits to various schools.

Inspection and Contagious Diseases:—11 boys and 912 girls were found to be suffering from Infectious and contagious diseases and were segregated by giving separate seats in the classess. Some were sent to Corporation dispensaries and some were sent to Infectious Diseases Hospital for investigation and treatment. 520 Students were having scabies and they were treated by issuing sufficient quantity of unguentum sulphuris for external use only.

Co-operation of Teachers:—There was good co-operation from the Headmasters and Teachers, by bringing the parents of the defective children, to take instructions from the doctors relating to hospitalisation, follow up, etc. The teachers also assisted the doctors in identifying the defective students and in giving treatment of defectives.

Sanitation of Schools:—Sanitary defects of schools with particulars, reference to latrines bath rooms, water supply, etc., were referred to the respective departments for repairs and improvements. The need for improving latrine facilities was keenly felt and the concerned department is taking necessary action in this matter.

General preventive work:—During Cholera season, the school doctors carried out Cholera inoculations in the Corporation schools in a tune of about 14,277 Cholera inoculations which greatly added to preventive measures taken by the divisional sanitary staff. First aid materials were supplied to the schools from the school medical stores and the class teachers rendered first aid to the children as and when required. Students with depigmented patches on the body were sent to skin clinic, Ice house for examination and treatment and the school ambulance used for transporting these students.

Physical fitness of Corporation Labourers:—65 women workers were examined by the lady doctors for fixation of age, physical fitness, and invalidation, and their fitness certificates submitted to Health Officer for finalisation and approval.

Supply of Spectacles:—Arrangements are being made to take poor children with defective vision to Ophthalmic Hospital, Egmore, for eye testing and provisions of spectacles from the donation made by the Ex. Governor General of India Sri C. Rajagopalachariar.

The following medicines and first aid articles were supplied to various schools for treatment and first aid purposes:—

- | | |
|------------------------|-------------------------|
| 1. Shark Liver oil | 11. Bandage |
| 2. Calcium lactate | 12. Guaze |
| 3. Iron tablets | 13. Vitamin 'C' tablets |
| 4. Yeast tablets | 14. Ear drops |
| 5. Tincture Iodine | 15. Mandles Solution |
| 6. Tincture Benjoin | 16. Glycerine Boraies |
| 7. Unguentum Sulphuris | 17. Argyrol Eyedrops |
| 8. Zinc ointment | |
| 9. Boric ointment | |
| 10. Cotton | |

2. School Lunch Programme

This pioneer scheme of the Madras Corporation was first introduced during the year 1925. The main aim of the scheme is to supply free meal at Midday to the poor and undernourished children attending the Corporation schools in the City. The scheme is not only improved the health of the children but also gave encouragement to poor parents to educate their children.

At the initial stage in the year 1925 the scheme was feeding for 500 pupils in the Corporation schools. Preparation of meals and other distribution to the schools, under hygienic condition were transferred to the Health Department in the year 1947. The scheme was reorganized by opening 3 Midday Meal Centres, one each in the North, Centre and South for preparation of meals in hygienic condition under the guidance of the supervisors appointed for each centre. Again the scheme was re-organised in 1957, to increase the nutritive value and to make the dishes palatable to children, change of menu in preparation and supply was introduced.

S. No.	On Days	Nature of Menu
1.	Mondays	Rice and sambar
2.	Tuesdays	Curd rice
3.	Wednesdays	Tamarind Rice
4.	Thursdays	Curd Rice
5.	Fridays	Rice and sambar
6.	Saturdays	Rice and sambar

The supply of Midday meals was gradually increased from 8,000 in 1947, to 34,035 in 1964. The increase of supply in various years is shown below:

Years	Number of meals supplied	Years	Number of meals supplied
1947 to 1952 ..	8,000	1958 to 1960 ..	28,730
1953 ..	10,000	1961 ..	33,895
1954 ..	11,000	1962 ..	33,953
1955 ..	12,000	1963 ..	34,027
1956 ..	13,000	1964 ..	34,035
1957 ..	18,000		

During the year the supply of 34,035 meals to various schools was made through the 3 Midday Meals Centres as follows:

M.M. Centre		Total No. of Schools and Creches	No. of Meals
North Range	..	110	11,953
Central Range	..	103	10,287
South Range	..	100	11,795
Total	..	313	34,035

Besides the main work of supplying Midday Meals to Corporation school children, the centres came to the rescue of the victims of Flood and Fire who were rendered homeless by preparing and supplying meals. In the year 1964 the centres supplied meals to the above victims as follows:

Centre	No. of meals supplied to victims of		
	Flood & Fire		
North Range	110
Central Range	..	6,070	..
South Range	..	7,900	..
Total	..	13,970	+ 110 = 14,080

The Midday Meals Scheme which has its value in the fields of Education and Health roused the enthusiasm of not only the other States of India but also the other foreign countries. Number of foreigners, Statesmen and officials of other States visited the Midday Meals Centre, South Range to study the working of the Scheme.

During the year under report the following Distinguished visitors from various parts of the world visited and expressed their views on the scheme.

1. Mr. Belfield Smith, F.A.O., Expert Adviser to the Government of Indian catering Technology.
2. Dr. Khin Nwe Aung (Burma).
3. Dr. Majid (Indonesia).
4. Mr. S.K. Chatterjee (Indian Army).
5. Mr. Florence G. Former, Women's Christian College.
6. Mr. D.M. Pearson, Honry. Prof. and Hance Science, S.V. University College, Thirupathi.
7. Mr. P.C. Goswami, Asst. Directors, Social Welfare, Government of Assam.

I feel that service of Midday Meals is being truly implemated and that Corporation and M.P.F. contemplated will further benefit the children.

I would like to congradulate the organisers in their effort and wish them well for the extension of the service.

(Sd.) BELFIELD SMITH,

*F.A.O. Expert Advisor,
Catering Technology to the
Government of India.*

The nine students in the first batch of M.Sc. of Sri Venkateswara University, Thirupathi watched the kitchen with me. We wish to congratulate the Corporation of the continuation of this important work. We are impressed much, the quality of the food and the way is prepared, However these meals could be a basis for nutrition teaching in the schools. You might be able to teach them to enjoy flavours, rather than hiding the flavours with so much chillies; when ghee can not be provided with it and considering the incidence of stomach ulcers in the country.

(Sd.) S. M. PEARSON,
Honry. Prof. of Hance Science,
S.V. University College,
Thirupathi.

Dated: 3-4-1965.

I was very pleased to visit this Midday Meals Centre, where a new experiment seems to have been going on with regard to envolving same means to feed the school children. I hope my visit will enable me to envolve similar scheme for the state of Assam. I wish this centre all success.

(Sd.) P.C. GOSWAMI,
Asst. Director of Social Welfare,
Government of Assam.

Dated: 18-1-1965.

We are impressed that the school lunch programme here is being carried on a large scale measure with a good supervision and arrangement.

(Sd.) Dr. MAJID,
(Indonesia).
(Sd.) Dr. KHIM NWE AUNG,
(Burma).

A large scale feeding programme of this nature has its inherent problems which require tackling by all out efforts. One particular point, I beg to submit that this building is not suitable for a large kitchen.

(Sd.) S.K. CHATTERJEE,
(Indian Army).

It has been interesting, seeing this food prepared on such a large scale again. I am sorry the steamer for rice was not in use to-day as it was when I brought students the last time. It will make the work much easier when it is ready.

15 M.Sc. STUDENTS
and FLORENCE G. FORMER,
Women's Christian College,
Madras-6.

MILK DISTRIBUTION SCHEME

Distribution of reconstituted milk to the undernourished children, attending the Corporation Schools in the city in addition to midday meals continued during the year 1964 also.

During the year 1964, 2,000 cases of milk powder aggregating 1,08,000 lbs. were donated by the Catholic Relief Services, New Delhi. 1,226 $\frac{1}{4}$ cases of milk powder were supplied to Madhavaram Milk Colony and 653 $\frac{3}{4}$ cases equivalent to 35,302 $\frac{1}{2}$ lbs. of milk powder were distributed to Midday Meals Centre. 10 cases of Milk Powder were given to Ashok Vihar where the reconstituted Milk was distributed to the poor and undernourished children of its member family. The remaining 125 cases of Milk POWDER were supplied to Military Camp, Fort St. George.

1. PUBLIC HEALTH LABORATORY

1964 is 19th year of the formation of Public Health Laboratory. The Public Health Laboratory is becoming more and more popular and also there has been appreciable improvements in respect of the reports and work. Public Health Laboratory is in need of much more improvements considering the increased population. For the City of Madras which has been divided by 100 divisions at least one more Public Health Laboratory should be opened for North, to meet the demands of the Public, as well as to help the poor. No doubt the Laboratory is situated in the heart of the City, but this centre cannot feed the whole City of Madras. Now this Public Health Laboratory is undertaking only limited work for the day for want of accommodation and the staff. This Laboratory provides facilities to the Medical institutions maintained by the Corporation of Madras as well caters to the needs of the private Medical practitioners in the City of Madras and their clients. etc. The fee schedule levied for the examination of specimens like Blood, Urine, Motion, Sputum, etc., etc., are very nominal, so as to be within the reach of the poor man; Public Health Laboratory, Corporation of Madras is intended for service to the Public and help such of the patients who cannot afford to pay the higher rates of fee charged by the State Government Laboratories of Madras or the private laboratories. Most of the Government Secretariat staff are benefited by this laboratory as they are referred for the investigations to this laboratory.

Kumari Dr. Shantha Arogyadoss continues to be in charge of the laboratory and is also assisted by two assistants Dr. M. Anantaram and Dr. Mrs. K. Sharada Bai. The Bio-chemistry, Section is under the Bio-chemists Thiru M.C. Arunachalam and Mrs. Fathima Khudisa assistant Bio-chemist. They are all assisted by many technicians with Thiru T. Srinivasan a senior technician.

The Public Health Laboratory is equipped with the latest equipments, etc., for conducting all most all the investigations namely Clinico-Pathological work, Bacteriological work, Serology work, etc., it is one of the 'A' Grade laboratories in the City of Madras which is run by the Corporation of Madras. Regarding the techniques adopted in the laboratory, the pathologist is trying her best to keep the laboratory on par with the foreign laboratories in all respects as far as possible.

Once again the Public Private Practitioners and Corporation Medical Institutions are informed that the Public Health Laboratory undertakes almost all examination, Viz. Clinico-pathological, Bacteriological, Serological and Bio-Chemical analysis, etc., etc. The schedule rates are cheaper than that charged by private laboratories as well as by the State Government of Madras. The examination of sputum for acid-fast bacilli and the throat swab for C. Diptheria are done free of cost with a view to encourage the Public as well as to have these examination done without hesitation, from the Public Health point of view.

STATEMENT No. I

Statement showing the progress of the Laboratory since the year 1946.

Year	Number of Samples	Receipts	
		Rs.	P.
1946	311	215	00
1950	16,346	10,939	00
1955	43,955	24,118	00
1960	48,286	31,103	25
1964	41,882	29,458	00



SECTION-F

LABORATORY SERVICES

7-NOV-32

RECEIVED YACHT CLUB

PATHOLOGIST LABORATORY



Que for delivering the samples for exam.

The above statement shows, that year after year the Public Health Laboratory is becoming increasingly popular and the number of samples examined are steadily on the increase. With some more accommodation and staff it would be possible for this laboratory to render great services, and help the poor of the City of Madras. Of late the Corporation Medical institutions are evincing great interest and are taking full advantage of the facilities provided and there by treating the patients more scientifically with quick relief. About 60% of the specimens examined at the Public Health Laboratory are from the Corporation Medical institutions.

STATEMENT No. II

Statement showing the details of the specimens received from the Private Practitioners as well as from various Corporation Medical Institutions during the year under review.

Private Practitioners	Corporation Medical Institutions				Total
	C.W.C.	Dispensaries	Clinics	Others	
20,982	15,223	6,386	649	..	43,240

STATEMENT No. III

Statement showing the total No. of various specimens received during the year.

Blood	Sputum	Urine	Motion	Bio-Chemical Analysis	Others	Total
32,076	1,579	3,160	3,071	1,543	1,811	43,240

In the Year 1964, the Laboratory handled 43,240 specimens and number of each kind of specimens examined during the year is detailed above.

Public Health Laboratory is doing the routine screening of the pregnant women's blood, who attend the anti-natal clinics of the Child Welfare Centres, Corporation of Madras. This programme started in the year 1951 with routine screening of anti-natal cases of five centres only. In the year 1951 the total number of samples examined was 543. The rate of positives was 5%. Now we are doing the routine screening of the anti-natal cases referred from by twenty two (22) Child Welfare Centres of Corporation of Madras. During the year the number of samples examined were 13,650 out of this 1,365, who had their blood examined 443 cases were positive for venereal diseases. The rate of positive is only 3%. Syphilis usually terminals pregnancy also but, the child born of syphilitic parents will congenitally acquire the diseases and it will be a great thing if this is detected, before the child is born, and the mother treated, to prevent the child that is born, from acquiring the diseases congenitally. With this idea this scheme was put into operation. The UNICEF donated some equipments in the year 1951 which is of great help in working out the scheme with the Co-operation of the Public. Subsequently the equipments have been supplemented by the apparatus and glassware and pencillin purchased by the Corporation of Madras.

The aim is to cover up all the Child Welfare Centres but this needs additional accommodation and staff in this laboratory.

Statement showing the details of pregnant women examined for Venereal Diseases, the number of reactive, non-reactive, etc., and also treatment done with the Penidure L.A., etc., in details.

STATEMENT NO. IV

New cases of Sero Reacting	Old cases of Sero Reacting	New cases of Sero- reactive treated	Old cases of Sero- reactive treated	Total cases treated (New and Old)	Total attendance at the clinics
419	141	145	126	271	15,274

Reactive	Partly Reactive	Non-Reactive	Total	Penidure L.A. used for treat- ment of positive cases
438	5	13,207	13,650	966 Vials

Clinic interviewed	Home visits	Letters sent
1,436	549	73

STATEMENT NO. V

Statement showing the quantity of Penidure L.A., (as directed by the Director, Venereal Dept., G.H. of Madras) purchased from the local Market and issued to the Centres and the closing balance during the year.

Opening Balance	Receipts	Total	Issue	Closing Balance
534 Vials	1,000 Vials	1,534 Vials	1,129 Vials	405 Vials

STATEMENT NO. VI

Statement showing the details of Serological Tests Conducted during the year from the Private Practitioners and also Child Welfare Centres, Coporation of Madras.

Sources	No. of Reactive	Partly Reactive	Total Negative	Grand Total
Child Welfare Centres	.. 438	5	13,207	13,650
Private Practitioners	.. 156	..	1,728	1,884

STATEMENT NO. VII

Statement showing the Bio-Chemical Analysis done since 1959.

S. No.	Nature of Examinations	1959	1960	1961	1962	1963	1964
1.	Acid Phosphatase ..	1	3	3	1	7	7
2.	Alkaline Phosphatase ..	..	4	19	14	14	31
3.	Blood Sugar ..	159	235	354	426	508	482
4.	Blood Cholesterol ..	32	120	205	233	286	245
5.	Blood Urea ..	68	88	200	246	353	246
6.	Blood Fibrinogen ..	..	1	..	..	..	..
7.	Blood Chlorides ..	..	1	2	..	..	1
8.	Cerebro-Spinal Fluid ..	52	35	102	62	73	99
9.	Fractional Test Meal ..	13	43	41	65	14	16
10.	Glucose Toierance Test ..	56	97	118	150	173	124
11.	Icteric—Index ..	5	28	33	38	50	25
12.	Non-Protein Nitrogen ..	..	8	10	3	3	4
13.	Prothrombin Time ..	9	5	21	32	14	15
14.	Serum Calcium ..	10	6	9	4	6	15
15.	Serum Bilirubin ..	..	5	13	14	38	28
16.	Serum Proteins ..	6	46	81	105	93	86
17.	Thymol Turbidity ..	2	14	30	26	68	70
18.	Urea Clearance ..	7	12	6	12	36	21
19.	Vanden Bergh Test ..	3	16	41	22	38	21
20.	Serum Phosphorus ..	..	..	6	2	4	6
21.	Stomach Fluid (Proteins) ..	..	..	..	..	..	1
		423	767	1,294	1,455	1,719	1,543

The amount collected towards the fees for the Bio-Chemical analysis done this year is Rs. 7,843.

Fees at the scheduled rated for the examinations of specimens for the clinical-Pathological, Serological, Bacteriological tests are as follows;

Scheduled Rates

S. No.	Details	Rs.	P.
1.	Blood counts R.B.C. W.B.C. D.C. Hb% etc.	1	00
2.	Blood Agglutination test (Widal)	2	00
3.	Blood Culture for enteric Group	2	00
4.	Blood for V.D.R.I. test	2	00
5.	Blood for Kahn test	2	00
6.	Blood-quantitative V.D.R.L. test	2	00
7.	Blood for Sedimentation rate	1	00
8.	Motion Culture	2	00
9.	Motion for Microscopic examination	1	00
10.	Urine for quantitative examination, Sugar and Albumin	1	00
11.	Urine for qualitative examination	1	50
12.	Other Smears for examination G.C. etc.	1	00
13.	Skin smears for Hansen's Bacilli	1	00
14.	Semen examination for spermatozoa	1	00
15.	Semen complete examination	4	00
16.	Blood Gel test	1	00
17.	Blood for Vanden Berg test	1	00
18.	Blood for chopra	1	00
19.	Bleeding time	1	00
20.	Coagulation time	1	00

Scheduled Rates—(contd.)

S. No.	Details	Rs.	P.
21.	Platelet count ..	1	00
22.	Sputum for other organisms (grams stain) ..	1	00
23.	Sputum for culture (ordinary) ..	2	00
24.	Sputum for T.B. culture ..	2	00
25.	Urine for culture ..	2	00
26.	Pus culture ..	2	00
27.	Pus for gram-stain (other organisms) ..	1	00
28.	Any other material for examination sent by the Private doctors sputum for A.F.B. alone done free. Throat swab for C.Diphtheria alone done free ..		

Scheduled rates for Bio-Chemical Analysis

S. No.	Details	Rs.	P.
1.	Blood Sugar ..	3	00
2.	Glucose Tolerance test ..	12	00
3.	Fractional test Meal Analysis ..	20	00
4.	C.S.F. for sugar	} for all the three tests	18 00
5.	C.S.F. Proteins		
6.	C.S.F. Chlorides		
7.	C.S.F. for globulin ..	2	00
8.	Vandenberg test ..	1	00
9.	Icteric Index ..	2	00
10.	Serum Bilirubin ..	6	00
11.	Serum total Proteins Albumin, Globulin ..	12	00
12.	Serum Alkaline Phosphatase ..	8	00
13.	Serum calcium ..	6	00
14.	Serum Phosphorus ..	6	00
15.	Serum Acid Phosphatase ..	8	00
16.	Thymol Turbidity ..	5	00
17.	Prothrombin time ..	5	00
18.	Blood chloride ..	6	00
19.	Urine Chloride ..	6	00
20.	Serum cholesterol ..	6	00
21.	Urea Clearance test ..	11	00
22.	Blood urea ..	6	00
23.	Non-Protein Nitrogen ..	8	00
24.	Blood Fibrinogen ..	8	00
25.	Quantitative estimation of any other content not mentioned above except 17. Keto-Steroids ..	8	00

The examination of samples for the Corporation employees drawing a salary of less than Rs. 300 and their dependents is done free of charge.

Specimens received from the Corporation Institutions are charged at the scheduled rate for the Bio-Chemical Analysis only.

The Laboratory works from 10-30 a.m. to 5 p.m. at present. We receive enough number of specimens for examination for the day by 10-30 a.m. itself and hence we are forced to restrict the number of samples tested for the day by 10-30 a.m. because of the heavy load of work in the laboratory daily. In case the number of specimens are too many for the day, the patients are given an appointment for the next day or for a subsequent working day, to go over the laboratory with a fresh specimens by 10-30 a.m. Now every day,

PATHOLOGIST LABORATORY



Laboratory at work (Blood taking etc.)

PREVENTION OF FOOD ADULTERATION ACT, 1954

—:0:—

PUBLIC ANALYST'S LABORATORY

MADRAS CITY

1964

A - Number of Samples Analysed

A

B - Number of Adulterated Samples

B

Scale:—

on X axis—1" represents 5 years

on Y axis—1" represents 1,000 samples

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the laboratory is over crowded with the patients who come for investigation. It is requested that the patients fix up time for examination of blood counts, G.T.T. etc., previously at the Public Health Laboratory during working hours between 10 a.m. to 5 p.m. to help the laboratory to carry on the analysis without interruption.

The examination for the graduate Medical Technology are also conducted at the Public Health Laboratory Corporation of Madras every year by the 2nd week of January. Dr. Miss. S. Arogyadoss, M.D. D.G.O. Pathologist has been the Chairman of the Board of Examiners. The diploma is recognised by the Government of Madras for appointment in the service.

Investigation of specimens from I.D.H.T. like motion culture for cholera, Bio-Chemical analysis, Serological Examination, etc., etc., are also done at the Public Health Laboratory. The positive strains of Cholera are referred to Dr. S. Mukerjee, M.B.D. Phil. Head Division of Microbiology, Indian Institute of Bio-Chemistry and experimental Medicine, P-27 Prinsep street, Culcutta, to help in research programme.

During the year under review the building for housing the Bio-Chemistry section is almost completely finished. Water and Gas all being installed and as soon as they are ready, it will be occupied and their will relieve the congestion of the clinical pathology section to some extent.

2. PUBLIC ANALYST LABORATORY

The Central Prevention of Food Adulteration Act, 1954 (Act No. XXXVII of 1954) which came into force in the City of Madras on the 1st June, 1955, is in the tenth year of its working in the City. A decade of its working in the City has produced noticeable improvement in putting down adulteration appreciably. The percentage of adulterated samples has been brought down by about 50 per cent from 45.5 in 1954 to 23.3 in 1964; the number of samples analysed has also gone up by about 2,500 samples inclusive of several newer varieties of good articles (vide Graph attached).

The total number of samples analysed during the year 1964 by the Public Analyst's Laboratory was 7,849 of which 7,740 were taken under the Prevention of Food Adulteration Act; 109 were received informally from various departments of the Corporation and private parties for analysis. Additional new varieties of food samples were also analysed, the details about which are given subsequently under the relevant sections.

Milk:—4,421 milk samples accounted for 50.7 per cent of the total number of samples analysed in 1964.

Description	Number of samples			Percentage of adulterated samples	Adulteration caused		
	Analysed	Genuine	Adulterated		By Addition of water	Due to fat Deficiency	By both added water and fat deficiency
Cow's milk ..	2,233	1,546	687	30.8	557	78	52
Buffalow's milk ..	1,718	1,181	537	31.3	508	9	20
Mixture of Cow's and Buffalow's milk ..	468	203	265	56.6	253	2	10
Unclassified Milk ..	2	..	2	100.0	2	..	..
Total ..	4,421	2,930	1,491	33.7	1,320	89	82

For the 1,546 genuine samples of cow's milk, the average values of milk fat was 5.2 per cent and of milk solids other than milk-fat was 9.1 per cent; while for the 1,181 samples of buffalow's milk, the corresponding values were 7.6 per cent and 9.9 per cent.

Among the adulterated samples, the average per cent of added water was 21.2 per cent, the minimum and maximum limits being 2 per cent and 78 per cent respectively, while the average value for fat deficiency was 27.6 per cent, the range lying between 8 per cent and 100 per cent.

The 2 milk samples shown as unclassified in the statement given above were sold as "Milk" without any indication as to their source and both were adulterated.

A large number of samples sold to the Food Inspector under the popular declaration of "Mixture of Cow's and Buffalow's Milk" by the vendors in contravention of Rule 44 (k) of the Prevention of Food Adulteration Rules have invariably been found to be adulterated heavily.

Butter:—526 samples were analysed, 462 being genuine and 64 adulterated. In 59 of the 64 adulterated samples the water content ranged from 19.1 to 69.3 per cent (average working to 25 per cent) exceeding thus the maximum limit prescribed under the Prevention of Food Adulteration Rules, one sample, whose water content was below the legal limit, was declared adulterated as the milk fat contents was much below the required minimum.

In the case of 13 adulterated samples while their water content was higher than 20 per cent (the permissible maximum) their milk fat content was also not upto the standard, foreign fat having been detected in 12 of these samples.

Ghee:—Only 23 samples out of the 865 analysed proved to be adulterated. 17 of these samples proved to be substandard in quality, 11 of which having been admixed with fat other than milk fat, the most commonly used fat for such adulteration being Vanaspati (Hydrogenated Vegetable oils). Adulteration ranged from 5 per cent to 89 per cent (average 35.5 per cent). 6 samples were condemned as adulterated as they contained free fatty acids exceeding the permissible maximum of 3 per cent (calculated as Oleic Acid).

Edible Oils:

Description		Number of samples analysed	Number of samples declared		Percentage of adulterated samples
			Genuine	Adulterated	
Gingelly oil	..	845	778	67	7.9
Groundnut oil	..	228	215	13	5.7
Cocoanut oil	..	277	274	3	1.1
Refined oil	..	1	1	..	..
Total	..	1,351	1,268	83	6.1

Amongst the adulterated Gingelly oil samples, 60 contained Groundnut Oil ranging from 5 per cent to 70 per cent. 12 of these 60 samples contained in addition excess free fatty acids and one contained other oils as well. 6 samples of Gingelly oil, not containing any admixture with other oils, were declared adulterated due to the presence of excess free fatty acids ranging from 2.7 to 5.8 indicative of high deterioration in quality. (The maximum limit for free fatty acidity being 3 per cent calculated as Oleic Acid). In one case the nature of adulteration was complete substitution with Groundnut Oil and selling the stuff "misbranded" as Gingelly Oil.

Out of the 228 samples of Groundnut Oil, 13 were certified to be adulterated. 9 samples contained Gingelly Oil, 2 samples consisted of a mixture of Gingelly Oil and Cocoanut Oils with Groundnut Oil, one sample was sold "misbranded" as Gingelly Oil and one sample contained Gingelly Oil, Cocoanut Oil and other Oils. One sample of Refined Oil was analysed and certified to be Genuine.

Of the 277 samples of Cocoanut Oil analysed, 3 were certified to be adulterated. One sample proved to be a mixture of Cocoanut Oil with both Groundnut Oil and Gingelly Oil and one sample contained Groundnut Oil and other Oils. Only one sample had been found admixed with mineral oil.

Coffee:—48 of 214 samples received for analysis were found to be adulterated. The adulterant consisted of a preparation of either Bengal gram Pea or Date Seed or a mixture of both in 21 cases. In the place of pulses which rose up in cost very much to their Scarcity, the Cereal, Wheat, came in handy as an adulterant in five cases yielding rich water extractives. In four cases, the Chicory contents as labeled on the container had been partially replaced by Date Seed and some foreign husks. The rest (i.e. 7 samples) contained a high percentage of Coffee husk and associated mineral matter and dust. For breach of Labelling regulations, 11 samples were declared as "misbranded," in two of these, the Chicory content had been completely substituted by Date Seed.

Tea:—111 samples were analysed. 5 samples were found to be adulterated, Blackgram husk was found in one sample. In two samples Blackgram husk and prohibited coal-tar colours were detected. One sample contained Tea admixed with Blackgram husk and starch, suitably treated with prohibited coal-tar colours to simulate good tea. The remaining one sample was deficient in Aqueous Extract.

A sample of prepared beverage tea was free from adulteration.

Ghee Substitutes:—All the 8 samples analysed were found to be upto the standards prescribed consisting of hydrogenated vegetable oil (Groundnut oil).

Miscellaneous Food Stuffs:—243 samples of other varieties of food articles were analysed and 88 were found to be adulterated. The details are given below:

Thoovar Dhall:—18 samples out of the 101 examined were declared adulterated. 12 samples were coloured with a prohibited coal-tar colour, 2 samples contained Kesari Dhall (Lac Dhall), one sample consisted of decayed and fungal attacked pieces, 2 samples contained Kesari Dhall and were also coloured with a prohibited coal-tar colour and one sample was highly insect-infested, damaged and artificially coloured with a prohibited coal-tar colour. The recurrence of adulteration with Kesari Dhall is traceable to the increased cost of the pulses the scarcity of which was keenly felt in the City. Timely action taken resulted in the seizure of several bags of this poisonous dhall *Lathyrus Sativus* in various parts of the City, thus preventing its sale to the Public.

Musur Dhall:—Two samples were analysed and one was adulterated with foreign grains.

Bengalgram Flour:—The two samples analysed were found to be genuine.

Wheat (Samba):—Of the two samples analysed, one sample was insect infested and damaged. As such, it was certified to be adulterated.

Ravai:—The two samples examined were found to be genuine.

Wheat Atta:—Two samples were analysed and both were slightly deficient in their gluten contents.

Maida:—19 samples of Maida were analysed and all of them were found to be genuine.

Sago:—One sample was analysed and found to be genuine.

Arrow Root:—Of the 3 samples analysed, 2 were reported as genuine, consisting of the starch derived from *Maranta arundinacea*. The remaining one sample was condemned as traces of Tapioca starch was found in it.

Turmeric:—Of the 54 samples analysed, 19 samples were reported as adulterated. 11 samples contained lead to the extent of 40 to 1,250 parts per million of the sample (lead content should not exceed 2.5 parts per million). 2 samples contained excessive lead as well as high total ash contents. 6 samples, sold as Turmeric powder had been admixed with Chillies, pulses and yielded cereal starches.

Chilli Powder:—All the 9 samples analysed were certified as adulterated. They were adulterated with Turmeric, starch, Bengalgram, pulses and excessive acid insoluble matter.

Dhania Powder:—One sample was analysed and reported as adulterated. The sample contained turmeric, chillies and starch.

Mixture of Chillies and Dhania Powder:—All the 3 samples analysed were declared as adulterated since they contained also Turmeric, pulses, extraneous matter and excessive sandy matter.

Sambar Powder and Curry Powder:—One sample of sambar powder and one sample of curry powder were analysed. Curry powder was found to be genuine. The sambar powder contained slight excess of total ash and useless sandy matter and so it was condemned.

Asafoetida:—Two Asafoetida samples of Compounded variety and one of plain type were analysed and declared as adulterated. The samples were all deficient in alcoholic extractives and contained artificial coal tar colour and starch.

Bura Sugar and White Sugar:—One sample of Bura Sugar and 2 samples of white sugar were analysed and were found to be genuine.

Brown Sugar:—One sample contained slight excess of water insoluble matter and the other one contained slight excess of water insoluble matter and excess of acide insoluble matter as well; both were, therefore, condemned.

Jaggery:—3 samples were analysed and 2 were condemned. One of them contained a little excess of water insoluble matter and the other sample contained slight excess of total ash and water insoluble matter.

Honey:—2 samples were analysed. Both of them proved to be genuine.

Confectionery and Sweets:—7 samples were analysed. 5 samples were certified as adulterated as they contained prohibited coal tar colours.

Aerated (Carbonated) Water:—All the 8 samples analysed were declared as "Misbranded." They were sold under various descriptions, namely, sparkling orange, orange crush, cola, queen's cup, orange colour, etc. All the samples contained artificial sweetening agents, namely, saccharine, coal-tar dyes and preservatives. Labelling in all these cases was defective.

Ice Cream:—5 samples were analysed. They were certified as adulterated as they were highly deficient in both total solids and in milk fat and contained saccharine and prohibited coal tar colours.

Fruit Products:—3 samples were analysed. One sample contained coal tar colour and the label was incorrect and one sample contained coal tar colour, artificial sweetening agent and was incorrectly labelled and one sample contained prohibited coal tar dye and was deficient in total solids also. They were certified as adulterated and misbranded.

Food Colours:—4 samples were analysed. 3 samples were sold under the name of “Kesari powder” and one under the name of “Metanil yellow non-edible kesari powder”.

3 of them consisted of prohibited coal tar dyes, starch and extraneous matter. One sample contained prohibited coal tar colour, starch and disgusting animal substances. All the 4 samples were certified as adulterated.

Informal Samples:—The analysis of 109 informal samples were undertaken on behalf of the other Departments of the Corporation as well as several co-operative institutions in the City.

The details regarding these 109 samples are given hereunder:—

<i>Source</i>	<i>Nature of the article</i>		<i>Number Analysed</i>	<i>Report of analysis</i>
(1)	(2)		(3)	(4)
Health Department	Thoor Dhall	Tender	5	Graded according to their quality.
Do.	Boiled rice	samples	.. 7	
Health Officer	Rice		.. 7	2 Consignment may be utilized after the necessary polishing; the rest were declared unsatisfactory.
Do.	Thoor Dhall		.. 2	Adulterated.
Do.	Cadbury's Milk Chocolate		.. 1	Satisfactory.
Do.	Cheeka (Soap-nut) powder		.. 1	Unsatisfactory.
Circle Health Officers	Milk Powder		.. 4	Unfit for human consumption.
Do.	Pal Gova		.. 1	Genuine.
Do.	Aerated water		.. 5	3 misbranded; 1 artificially coloured with coal-tar dyes and 1 satisfactory.
Do.	Slaked lime		.. 1	20% poorer in quality.
Do.	Curd prepared out of the milk powder		.. 1	Unfit.
Do.	Calcium carbide		.. 1	Opinion offered in connection with its storage.

(1)	(2)	(3)	(4)
Sanitary Inspectors	Milk Powder	.. 1	Fit for human consumption.
Do.	Pal Gova	.. 1	Insect infested and fungal attacked.
Do.	Gammexane	.. 1	Opinion about their composition furnished.
Do.	Pyrethrum Extract 2%	.. 1	
Superintendent, Infectious Diseases Hospital, Tondiarpet	Milk	.. 1	Genuine.
Do.	Broken rice	.. 4	1 satisfactory.
Do.	Blackgram dhall	.. 2	Genuine.
Do.	Thoor dhall	.. 3	2 genuine and 1 adulterated.
Lady Superintendent, Child Welfare Scheme	Milk Powder	.. 2	Unfit for human consumption.
Corporation Accounts Committee	Gingelly Oil	.. 2	Genuine
Do.	Thoor Dhall	.. 1	Unsatisfactory in quality.
Revenue Department	Stearic Acid	.. 1	Opinion about their composition for licensing given.
	Aromatic Chemicals	.. 2	
	Chloramphenical (powder packed in capsules)	.. 1	
	Essential oils	.. 4	
Electrical Department	Transformer Oils	.. 18	Opinion about suitability for use furnished.
Secretary, Triplicane Urban Co-operative Society Limited (P)	Thoor Dhall	.. 12	5 Genuine; 7 adulterated.
Do. (P)	Bengalgram Dhall	.. 3	2 Genuine; 1 unfit.
Do. (P)	Gingelly Oil	.. 5	Genuine.
Do. (P)	Cocoanut Oil	.. 2	Genuine.
Gorden, Woodroffe Leather Manufacturing Company, Madras	Salad Oil	.. 1	Certified as Groundnut oil.
Dunlop Rubber Company (India) Private Ltd. (P)	Milk	.. 5	Adulterated.
Total		.. 109	

(P)—Samples examined on payment of cost of analysis;

Total amount collected from private parties Rs. 160.

During 1964, the staff of the Laboratory was as follows:

Public Analyst	..	Thiru S. Sundaram, M.A., A.R.I.C.
Senior Assistants	..	(1) Thiru R. Ramalingam, M.Sc.
		(2) „ V. Venkataramana Rao, B.Sc. (Hons.), M.Sc.
Junior Assistants	..	(1) „ C. Rajaganapathi, B.Sc.
		(2) „ C. Sambandam, B.Sc.
		(3) „ M.A. Shahul Hameed, B.Sc.
		(4) Thirumathi N.M. Lakshmi Devi, B.Sc.
		(5) „ Khaleel Unnissa, B.Sc.

In addition to the fresh batch of five full-time Food Inspectors who relieved the old set with effect from October, 1964, fifty Sanitary Inspectors also continued to the duties of part-time Food Inspectors in their respective divisions.

Data about the number of samples taken and the percentage found to be adulterated therein are given in the “Food Analysis—Statement No. I” which covers the period 1959-1964.

Statement “Food Analysis No. II” gives the total number of samples taken by each of the five Food Inspectors and by the Sanitary Inspectors (Circle-war) in the city with figures about the number of samples found adulterated under each category.

The number of samples certified as adulterated during the year under report was 1,802. In respect of 189 samples which were only very slightly adulterated the vendors were warned by the Corporation against repeating such offences. On the remaining 1,613 cases, prosecutions were launched and convictions were obtained in 878 cases 3 ended in acquittal, and in 7 cases the parties were admonished by the court. The year ended with 725 cases still awaiting disposal.

On 1st January, 1964, prosecutions for adulteration launched in respect of the 5,707 cases of the previous years were still pending disposal at the Courts. 477 of these were convicted, 7 were acquitted, 4 admonished by the Courts and 532 cases were withdrawn leaving 4,687 old cases still pending disposal on 1st January, 1965.

The total number of convictions obtained during 1964 was 1,355 as against 1,604 in 1963. The total amount of fines imposed on these cases was Rs. 73,079 in 1964 compared to Rs. 88,875-50 P. during 1963, the average fine per conviction being Rs. 54 in 1964 against Rs. 55 in 1963. The heaviest fine levied was Rs. 2,000 in one milk case, while the fine was as low as Rs. 5 in three cases.

Particulars about the prosecutions launched in respect of the adulterated samples analysed during 1964 and of those of the previous years since 1-6-1955 pending disposal on 1st January, 1964 are given in the food analysis statement No. III in the appendix.

Amongst the 1,355 convictions obtained at the various presidency Magistrates' Courts, 7 were against vendors for second offences. In 6 of these 7 cases, the vendors were fined; in one case the vendor was sentenced to one year's Rigorous Imprisonment in addition to a fine of Rs. 2,000.

Parties were fined and released after imprisonment just till the rising of the Court in 6 cases.

2 milk vendors were convicted and fined Rs. 100 and Rs. 50 respectively for hindering the Food Inspectors from taking samples.

By way of fees for analysis, the Laboratory collected Rs. 160 from various institutions for analysis of 27 informal samples of food stuffs sent by them. Attracted by the timely issue of reports after analysis, several private parties are desirous of sending their samples here for analysis. But, dearth of technical staff and other facilities stand in the way of undertaking more number of samples for analysis here. Thus, the total income to the Corporation through the Laboratory by administering the Prevention of Food Adulteration Act in the City during 1964 came to Rs. 73,389.

Steps are being taken under the Prevention of Food Adulteration Rules for licensing all food dealers inclusive of hawkers and itinerary traders doing business in the City. It is hoped that this step will go along a way in putting down trade in adulterated food articles especially by the unregistered vendors and non-resident dealers thriving in the food trade in this busy Metropolis.

Proposals have already been submitted for additions to the staff space and Laboratory facilities. With their implementations, the Laboratory will be able to under-take the analysis of a larger number of food samples or more varieties as desired by the State and Central Governments; and will be in a position to issue certificates after fairly expeditious analysis.

PUBLIC ANALYST'S LABORATORY,

Ripon Buildings, Madras-3.

Dated: 22nd March, 1965.

3. WATER ANALYST LABORATORY

Introduction:

This is the 42nd report of the Water Analyst, setting out the work of the Water Analysis Laboratory for the year 1964. During the year under review, the water supply to the City continued to be a chlorinated mixture of filtrate from the slow sand filters and Rapid Mechanical Filters. On an average 35 to 36 million gallons of raw water were pre-chlorinated with a dose varying from 0.4 to 1.2 p.p.m. a day. About through sand filters, with six inches of fine sand, as the filtering medium which were worked without any rate of filtration, while the rest were again chlorinated 1.4 to 2.9 p.p.m.) treated with alum 2.6 to 4.3 g.p.g.) and lime (1.0 to 1.5 g.p.g.) flocculated clarified and filtered through Rapid Mechanical Filters. The filtrates of indifferent quality as obtained from the sand filters were mixed with the filtrates of fairly good quality as obtained from the Rapid Mechanical Filters chlorinated to a dose varying from 2.2 to 3.4 p.p.m. and supplied to the City.

The processed water, while being distributed deteriorated to a slight extent both aesthetically and bacteriologically and though the smell of Sulphuretted-Hydrogen was generally absent in the City distribution system, a few blood worms and leeches made their appearance at the consumers tap in only a very few localities during certain seasons. Scouring and sterilisation of the mains served to get right the defects.

The following are certain important features, worth mentioning in this report:—

- (1) The 27" main newly laid for feeding Kottur, Adyar was sterilised before commissioning.

(2) Complaints from public regarding the prevalence of leeches were received from defective areas which forms usual pockets for leeches infestations. Probably in these forms areas scouring of the mains could not be carried out either due to lack of pressure in the main or due to lack of pressure adequate fire hydrants in working condition. Wherever defective fire hydrants were noticed, the W.E.D. was advised to rectify the defects and restore them to working order. Such complaints were promptly attended to by scouring and sterilisation of the mains.

Scientific:

Water supply to the City is derived from three different sources namely (A) the Kortalaray River System, (B) the Infiltration Gallery Wells at Saidapet and Sembium and (C) the Shallow Wells at Adyar, Kodambakkam, Guindy, North Madras, Triplicane, Naduvakkarai and on the shores of Marina. The physical, chemical and bacteriological character of the water in each of the above three sources during the year are briefly dealt below:—

(A) The Kortalaray River System:—The river Kortalaray is dammed at Poondi, about 32 miles away from the city and sathyamoorthy Sagar has been formed for storing the flood discharges. The stored water is let down through the river bed and another channel, called the Upper Supply Channel, into the Sholavaram Reservoir and from the latter water is let down through the Lower Supply Channel into Red Hills Reservoir. The water from the Red Hills Reservoir gravitates through two closed masonry conduits into the Head Works at Kilpauk. The above sources were visited during February, June, September, October, November, and December only during the year and samples collected were analysed. The results of analysis are shown in the water Analysis Statements Nos. III, IV and V.

1. Sathyamoorthy Sagar (vide Statement No. II):—

The total yearly rainfall recorded at Poondi was 94.6 cm. as against 118.7 cm. was recorded during last year. The highest rainfall of 31.8 cm. was recorded in November. The monthly average reservoir level was 137.75 feet on January, declined to 125.70 feet in October and thereafter increased to 137.00 feet in December.

Physical, Chemical and Bacteriological characteristics observed during the time of inspections of the Poondi Reservoir (vide Statement No. III):—

The temperature of the water varied from 26.1°C to 32.5°C. The turbidity varied from 10 p.p.m. to 56 p.p.m.

The lowest being during January and November.

Chemically, the pH. varied from 8.5 to 9.2. The total alkalinity varied from 15.0 to 20.0 p.p. ht. The chlorides ranged from 4.0 to 6.1 p.p. ht. The hardness ranged from 7.0 to 12.2 p.p.ht. The conductivity of the water varied from 410 to 485 micromhos/ cm. at 25°C.

The Ammoniacal Nitrogen and Albuminoid Nitrogen ranged from nil to 0.019 p.p.ht. and 0.040 to 0.080 p.p.ht. respectively. The Tidy's figure increased from 0.190 p.p.ht. during June thereafter decreased to 0.283 p.p.ht. during December. The dissolved oxygen ranged from 5.04 cc/L to 6.72 cc.l.

The M.P.N. of coliforms varied from 2 to Infinite in 100 ml.

II. The Sholavaram Reservoir (vide Statement No. 11).

The total rain fall recorded in the catchment area of this reservoir was 117.2 cm. as against 117.3 cm. recorded during last year, the highest rainfall of 50.4 cm. was recorded during November. The monthly average water level was 60.33 feet in January, decreased to 47.00 feet during May and again increased to 62.12 feet during December.

Physical, Chemical and Bacteriological Characteristics observed during the time of inspection of the Sholavaram reservoir (vide Statement No. IV):—

The Temperature of the water varied from 28.0° C to 33.5° C. The turbidity ranged from 14.0 p.p.m. to 98.0 p.p.m. the lowest being during January and December.

Chemically, the pH. of the water varied from 8.4 to 8.7. The total alkalinity varied from 10.8 to 17.5 p.p.ht. The chlorides ranged from 3.4 to 6.7 p.p.ht. The conductivity of the water varied from 305 to 535 micromhos/cm. at 25° C.

The ammoniacal nitrogen and albuminoid nitrogen ranged from nil to 0.004 p.p.ht. and 0.040 to 0.048 p.p.ht. respectively. The Tidy's figure increased from 0.195 p.p.ht. in February to 0.448 p.p.ht. In June and thereafter decreased to 0.160 p.p.ht. in December. The dissolved oxygen varied from 5.43 to 6.25 cc/L during the year.

The M.P.N. of coliformin 100 ml. ranged from 26 to Infinite.

III. The Red Hills Reservoir (vide Statement No. 11):—

The total rainfall recorded in the lake region was 79.16 cm. as against 95.4 cm. recorded during last year. The monthly average water level was 45.86 feet in January, decreased to 38.79 feet in July and thereafter rose to 45.87 feet during December.

Physical, Chemical, Bacteriological conditions observed during the time of inspections of the Red Hills Reservoir (vide Statement No. V and Graph No. 1):—

The water was yellowish in October, greenish during September and slightly yellowish during rest of the occasions.

The turbidity of the water fluctuated between 12.5 p.p.m. The turbidity increased from 29.0° C. in January to 31.5 p.p.m. in September and thereafter decreased to 21.5 p.p.m. in December.

Chemical conditions.—P.H. The water was alkaline throughout the year. The pH. varied from 8.7 to 8.9.

Carbonates.—Carbonates varied from 0.96 to 1.10 p.p.ht. during October, 1.44 p.p.ht. during November and thereafter increased to 1.2 p.p.ht. during December. The yearly variation was from 0.72 to 1.44 p.p.ht.

Bicarbonates.—Bi-carbonates varied from 12.7 to 19.0 p.p.ht. Bi-carbonates increased from 14.6 p.p.ht. during February to 19.0 p.p.ht. during October and thereafter decreased to 12.7 p.p.ht. during December.

Hardness.—The water was soft throughout the year. The hardness varying 7.2 to 9.0 p.p.ht. expressed as CaCo₃. The variation was 8.0 to 8.4 p.p.ht. during February, September, October and December, 9.0 p.p.ht. during June and 7.2 p.p.ht. during November.

Dissolved Oxygen.—Dissolved Oxygen content varied from 5.11 to 6.23 cc/L. The percentage of saturation varied from 97 to 115. The water was undersaturated during February and June saturated during September and December and supersaturated during October and November.

Phosphates.—Phosphates were absent in February, September and October, but were present during June, November and December to the extent of 0.001 p.p.ht.

Silicates.—Silicates varied from 1.6 to 2.0 p.p.ht.

Oxidisable Organic matters.—(Tidy's Test)—The figures for Tidy's test varied from 0.205 to 0.397 p.p.ht. The oxidisable organic matter increased from 0.211 p.p.ht. during February to 0.397 p.p.ht. during October, decreased to 0.205 p.p.ht. during November and again increased to 0.258 p.p.ht. during December.

Ammonical Nitrogen.—The Ammonical Nitrogen was absent during February and June and ranged from 0.002 to 0.003 p.p.ht. during September, October, November and December.

Albuminoid Nitrogen.—The Albuminoid Nitrogen content varied from 0.040 to 0.064 p.p.ht. The value for the samples collected during September was 0.064 p.p.ht. while those for the samples collected during rest of the occasions varied from 0.040 to 0.048 p.p.ht.

Biological.—The M.P.N. of coliforms in 100 ml. ranged from 542 to infinite.

Among the planktonic organisms, Cyanophyceae was predominant throughout the year. Among the Cyanophyceae, Microcysts, Anabaenopsis, Oscillatoria, were present in abundance almost throughout the year. Chlorophyceae, protozoans and Rotifers were subdominant throughout the year. Di-automs and Desmids were rare throughout the year.

The following is the list of species which were very common, and rare:—

<i>Very Common</i>	<i>Common</i>	<i>Rare</i>
Oscillatoria	Anabaena	Chroococcus
Anabaenopsis	Peridinium	Pedistrium
Microcysis	Merismopaedia	Trachelomonas
	Fuglena	Oocystis
	Coelospherium	Synedesmus
		Synedra
		Navicula
		Brachionus
		Coleps
		Bursaria
		Phacus

IV. Chlorinated Raw Water (vide Statement No. VI. Graph 11):—

The raw water reaching the Kilpauk Water Works was chlorinated with gaseous chlorine just a few minutes before reaching the sand filters and the flocculators. The dose of chlorine applied to the raw water varied from 0.4 to 1.2 p.p.m. The percentage of first class samples. (The M.P.N. of ciliformssil in 100 ml.) ranged from 0 to 85.

The monthly variation in the concentration of the salient constituents of the chlorinated raw water were as given below:—

	<i>Yearly range</i>			
pH.	..	8.3	to	8.8
Chlorides	..	4.8	to	7.1
Ammonical Nitrogen	..	0.002	to	0.005

Hardness	..	7.7	to	9.3
Albuminoid Nitrogen	..	0.040	to	0.068
Oxygen Absorbed	..	0.169	to	0.306
Iron	..	Trace	to	0.010
Sp. Conductance (Micromhos/cm at 25° C)	..	375	to	520
Turbidity (p.p.m.)	..	11	to	31.5

V. Slow Sand Filters and Filtration (vide Statement No. VII and Graph No. 11).

There are seventeen Sand Filters with 6" of fine sand as the filtering medium. They are not worked with any fixed rate of filtration. The filtrates are therefore of indifferent quality during the year under review on an average 12 to 13 beds were in commission every day and the quality of water strained varied from 26 to 29 million gallons a day.

On the chemical side, the quality of the filtrates were almost of the same quality of the chlorinated raw water. The percentage of reduction in the Tidy's figure over the corresponding figure for the chlorinated raw water varied from 0 to 21.

Bacteriologically 0 to 15% of the samples examined showed the absence of coliform organisms in volumes of 100 ml. (M.P.N. nil in 100 ml.)

The monthly variation in concentration of some of the important constituents of the filtrates from the sand filters were as given below:—

	<i>Yearly range in p.p.ht.</i>			
pH.	..	8.0	to	8.5
Chlorides	..	4.7	to	7.0
Ammonical Nitrogen	..	0.002	to	0.008
Albuminoid Nitrogen	..	0.030	to	0.056
Hardness	..	7.8	to	9.2
Oxygen Absorbed	..	0.133	to	0.039
Iron	..	Trace	to	0.010
Turbidity (p.p.m.)	..	4.1	to	17.6
Sp. Conductance (micromhos/cm at 25° C)	..	375	to	520

It could be seen from above that inspite of the application of a fairly high dose of chlorine to the raw water, feeding the sand filters, the filtrates from the beds were of poor bacteriological quality.

VI. Rapid Mechanical Filters (vide Statement No. VIII and Graph No. II) :—

About 6.4 to 9.8 million gallons of chlorinated raw water was again chlorinated with a dose of 1.4 to 2.9 p.p.m. to bring down the algal load prior to alum treatment. The chlorinated raw water was treated with alum to a dose varying from 2.6 to 4.3 g.p.g. and with lime to a dose varying from 1.0 to 1.5 g.p.g. flocculated, clarified and filtered through Rapid Mechanical Filters. The quantity of the filtrates varied from 6.4 to 9.8 m.g.d.

Chemically, the quality of the filtrates from the Rapid Mechanical Filters was far better than those from the slow Sand Filters. The percentage of reduction in Tidy's figure over that for the chlorinated water varied from 33 to 59.

On the bacteriological side 0 to 43 per cent of the samples examined, showed the absence of coliform organisms in volumes of 100 ml. (M.P.N.—nil in 100 ml.)

The variation in the concentration of some of the salient constituents were as given below:—

	<i>Yearly range in p.p.ht.</i>		
pH.	..	7.7	to 8.2
Chlorides	..	4.9	to 7.1
Hardness	..	8.4	to 10.6
Ammonical Nitrogen	..	Nil	to 0.004
Albuminoid Nitrogen	..	0.038	to 0.046
Oxygen Absorbed	..	0.075	to 0.201
Iron	..	Nil	to 0.010
Turbidity (p.p.m.)	..	3.1	to 8.4
Sp. Conductance (micromohos/cm) at 25° C	..	405	to 570

VII. Test Tap at K.P.S. (Vide Statement No. I and graph II)

The sample of water collected from the test tap at K.P.S. represented the mixture of chlorinated filtrated from the Slow Sand Filters and the Rapid Mechanical Filters. On the chemical side, the quality if the samples was the resultant of the individual quality of the filters from the Rapid Mechanical Filters and Slow Sand Filters owing to the blending effect.

On the bacteriological side 46 to 100 per cent of the samples collected at 11 a.m. and 44 to 100 per cent of the samples collected at 4.00 p.m. showed the absence of coliform organisms in volumes of 100 ml. (M.P.N.—nil in 100 ml.). The Sanitary quality of the samples collected from the test tap during the period April to September fell short of the standard prescribed by the I.C.M.R. for chlorinated filtered water. This may be attributed to the presence of excessive organic matter, higher pH. and other interfering substances present in the filtrates which might have retarded the bactericidal effect of chlorine. A residual of 0.2 to 4.0 P.P.M. of chlorine was generally maintained at the test tap.

The variation in the concentration of some of the salient constituents were given below:—

	<i>Yearly range in p.p.ht.</i>		
pH.	..	7.9	to 8.1
Chlorides	..	5.0	to 7.3
Hardness	..	8.0	to 9.4
Ammonical Nitrogen	..	Nil	to 0.021
Albuminoid Nitrogen	..	0.036	to 0.054
Oxygen Absorbed	..	0.089	to 0.253
Iron	..	Nil	to 0.010
Turbidity (p.p.m.)	..	3.2	to 9.3
Sp. Conductance (micromhos/cm at 25° C)	..	375	to 535

VIII. The City Distribution System (vide Statement Nos. XI, XII and XIII):—

The water distributed, deteriorated to a slight extent during transit through the lengths of mains. Such deterioration were more marked in Low Pressure areas and at tail ends of the distribution system. Bacteriologically 25 to 100%, 9 to 75%, and 10 to 100% of the samples collected from the high pressure and Booster areas, respectively showed the absence of coliform organisms in volumes of 100 ml. (M.P.N.—nil in 100 ml.)

The variation in the concentration of some of the salient constituents of the samples of water, distributed were as given below:—

Yearly range in parts per 100,000										
		H.P. areas			L.P. areas			Booster areas		
pH.	..	8.0	to	8.3	7.8	to	8.2	7.7	to	8.1
Chlorides	..	5.0	to	7.4	5.0	to	7.4	5.0	to	7.3
Hardness	..	7.7	to	9.5	8.0	to	9.6	7.7	to	10.0
Ammonical Nitrogen	..	Nil	to	0.008	Nil	to	0.011	0.002	to	0.010
Albuminoid Nitrogen	..	0.002	to	0.048	0.002	to	0.044	0.004	to	0.048
Oxygen Absorbed	..	0.097	to	0.235	0.096	to	0.216	0.086	to	0.220
Iron	..	Tr.	to	0.010	Tr.	to	0.020	Tr.	to	0.020
% of samples showing of cili-form organisms in 100 ml. (M. P.N.-nil in 100 ml.)										
	..	25	to	100	9	to	75	10	to	100

(B) The Infiltration Gallery Wells at Sembium and Saidapet (vide Statement Nos. XIV, XV and XVI):—

Water supply to Sembium and Saidapet areas were supplemented with chlorinated well water drawn from two Infiltration gallery at Sembium contained iron in suspension and as such the water was chlorinated at the head-works and then lime-treated at the over head tank and distributed. Filtration of the treated water at the over head tank and distributed. Filtration of the treated water is desirable to hold back the precipitated iron prior to distribution.

In case of Saidapet, the water from the Infiltration gallery was of satisfactory chemical quality and as such the water was just chlorinated and distributed.

The chemical characteristics of both the water were as given below:—

		<i>Yearly range in parts per 100,000</i>					
		<i>Sembiam</i>			<i>Saidapet</i>		
pH.	..	7.1	to	7.9	7.0	to	7.8
Chlorides	..	9.0	to	38.0	19.0	to	30.0
Hardness	..	15.0	to	26.0	25.0	to	26.0
Ammonical Nitrogen	..	Nil	to	0.004	Nil	to	0.003
Albuminoid Nitrogen	..	Nil	to	0.005	Nil	to	0.004
Oxygen Absorbed	..	0.010	to	0.052	0.008	to	0.050
Iron	..	0.030	to	0.150	Tr.	to	0.020
Total Solids	..	42.0	to	78.0	56.0	to	80.0
M.P.N. of Coliforms in 100 ml.	..	0			0	to	Infinite

The monthly average of percentage of samples showing absence of coliform organisms in 100 ml. (M.P.N.-none in 100 ml.) was 87 for sembiam distribution system and 52 for Saidapet distribution system. (Vide Statement No. XVII).

The shallow wells located at Ganapathy Colony (Guindy) served to supplement the Red Hills Water supply to Guindy. The water drawn from the well was just chlorinated and distributed. The wells located at Urur village and Kottur village served as source of water supply to Adyar area. The wells in United India Colony, Puliur (Kodambakkam), Nagappier street (Triplicane), in Marina Area Solayappan street (Washermanpet) and in T.H. Road (near Town clock) served as sources of water supply to Kodambakkam, Triplicane, and Washermanpet areas. The wells in Cherian Nagar, Market Farm and I.D. Hospital served to supplement the water supply to Tondiarpet area. The well in Naduvakkari served to supplement the water supply to Naduvakkarai area. The water pumped from the above wells were chlorinated and distributed.

All the shallow wells with the exception of those at United India Colony, Puliur (Kodambakkam), Ganapathy Colony (Guindy), I.D. Hospital T.H. Road (Tower clock), Kottur (Adyar) and at Naduvakkarai, yielded water of satisfactory chemical quality.

Sterilisation of Water Mains. (Vide statement No. XVIII).

During the year under review, the newly laid 27" Main for feeding Kottur and Adyar was scoured and sterilised before putting the main into commission. This was done by placing both the chlorine injectors on the job. Routine sterilisation of the old mains was also carried out, but not to the extent done during previous years, due to interruptions on account of complaination the prevalence of leeches and worms, when, the plants had to be put on the job of eradicating the leeches and worms. In all 19.6 K.M. length of water mains were sterilised, during the year.

In the course of survey of the complaints received from the Public regarding prevalence of leeches and worms in the distribution system it was observed that the areas listed below from the usual pockets for infestation by leeches. These are either low pressure and poorly served areas or areas located at tail end of the distribution system or areas where periodical scouring of the mains was not done due to various reasons. It was also observed at the time of sterilisation of the mains in the above areas that some of the Fire Hydrants were not in working condition and could not be operated, such defects were brought to the notice of the W.W.D. then and there and the necessity of periodical scouring of the mains through the Hydrants were also stressed.

1. Brighton Road, (Vysarpadi Dn. 32).
2. Perambur High Road and Chandrayogi Samadi Road (Dn. 35).
3. B.P. Road (Kalyana Maistry Garden. Dn. 36).
4. Shenoy Nagar area (Dn. 51).
5. Gopalapuram (Dn. 57).
6. Spurtank Road and Club Road (Dn. 67).
7. Triplicane (Venkatachala Mudaly Street (Dn. 78).

Effects of Sterilisation:—Brown, flocculent, soft deposits were dislodged from the sterilised portion of the mains, when scoured on the following day. The deposits consisted mainly of ferric oxide organic matter and iron bacterium (*Sidero Capsa* Sp. and *Leptothrix Ochraceae*). There was an increase in the iron content immediately after sterilisation, followed by a reduction thereafter.

During the year under review samples received from the private parties and complainants for purposes of evaluating their suitability for potability

and industrial uses amounted to 264 as against 226 received during last year. The fees realised on such analysis worked out to Rs. 2,640. The demand for collection of still more samples from Madras Harbour, we are unable to satisfy for want of analytical staff and facilities.

Staff.—Thiru V. Kripakaran, continued as the Water Analyst, Thiru S. Nagarajan, B.Sc., were the Assistant Water Analysts.

1. ASHOK VIHAR

Ashok Vihar, Health and Recreation Centre, a socio-medical, was established by the Corporation of Madras on 29-5-1948. Dr. P.S. Sambandam, continued to be the Director and Mrs. Abraham, the Deputy Director.

The following services were rendered:—

1. Service to member families.
2. Service to the local public.
3. Service to personal in the medical, nursing and social fields.

1. *Service to member families:*

Families of the low income group with a maximum monthly income of Rs. 150 residing at a walking distance from the centre were enrolled as members of the centre on a token payment of 6 Paise per month per family. A sum of Rs. 143-32 was collected by way of membership fees during the year.

The following services were rendered to the member families:—

- (a) Periodic health check up of every member of the family once a year.
- (b) Periodic immunization against common infectious diseases.
- (c) Health Education.
- (d) Recreation.
- (e) Social education.
- (f) Home visits.
- (g) Dispensary service.
- (h) Maternity service.
- (i) Family Planning service.
- (j) Service to children of working mothers—viz. creche.
- (k) Teaching of handicrafts.

Particulars of Families:

Total No. of families on rolls on 1-1-1964	..	244
Total No. of families enrolled during the year	..	48
Total No. of families removed during the year	..	43
Total No. of families on rolls on 31-12-1964	..	249

1. Monthly Income of Families

Income	Unemployed	Under Rs. 50	Rs. 51-100	Rs. 101-150	Over Rs. 150
Total No. of families	9	58	101	60	21



SECTION-G

RECREATION AND COMMUNITY CENTRES

SECTION-3

RECEIVED YINUNMOO DIA MOITANDEN

2. Year of Enrollment

Year	1948	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
No. of families	15	10	9	4	13	3	20	18	15	12	13	7	11	18	10	23	48

3. Caste

Caste	Harijans	Hindus	Christians	Muslims	Anglo-Indians
No. of families	117	91	10	22	9

4. Residence

Residence	Periamet	Periamet Slum	Chinthadri pet	Chinthadri pet Slum	Choolai	Choolai Slum	Other areas	Other areas Slums
No. of families	33	77	8	34	49	13	20	15
	Families residing in slums					..	139	
	Families residing in other areas					..	110	

5. Children per Family

No. of Children	Nil	1	2	3	4	5	6	7	8	9	10	11
No. of families	7	40	53	47	45	22	18	9	3	3	Nil	1

Average children per family—3

6. Nature of Work

Nature of work	Unskill- ed labour	Skilled labour	Trade	Clerical	Teaching	Priests	Pensio- ners
No. of familes	108	71	26	21	4	3	2
	Miscellaneous			Unemployed			
	5			9			

Health Services:

Periodic Health check up:—Members of families were given periodical health check up once a year to assess the individuals health and to diagnose diseases at their early stages. Such of those persons who revealed early diseases were investigated and treated appropriately.

461 general check ups were during the year. 311 persons were re-examined of which 234 recorded increase, 60 reduction and 17 stationary weight. During this year almost every individual member suffered from dengue. 9 members have been continuing treatment for pulmonary tuberculosis in different T.B. clinics. Two of whom, Srimathi Jayaseeli, F.R. No. 113 and Srimathi Dhanam, F.R. No. 8, were admitted in the T.B. Sanatorium, Tambaram. 12 children were treated for primary complex.

The following were the diseases noted in the Health check ups:

Pulmonary tuberculosis	..	9	Hydrocle	..	2
Deficiency Diseases	..	43	Hernia	..	1
Respiratory infections	..	138	Asthma	..	1
Primary complex	..	12	Chronic aloholism	..	4
Dysentries and diarrhoeas	..	126	Mentally defective	..	2
Digestive disorders	..	32	Speech defect	..	1
Cardiac diseases	..	2	Cleft palate	..	1
High Blood Pressure	..	4	Error of refraction	..	2
Diabetes	..	1	Dental caries	..	4
Tonsils and adenoids	..	10	Cataract	..	1
Hansons disease	..	1	Skin diseases	..	37
Helminthic infections	..	148	Filariasis	..	4

620 pathological investigations were done of which 330 were pathological. 75 persons were referred to the Government Hospitals for specialists opinions or for admission. 31 persons were referred to T.B. Clinics.

Periodic Immunization.—The small-pox eradication scheme was responsible for all the members being vaccinated against small-pox. Children under the age of 10 were given Triple Vaccine. Manteaux test was done for 118 children and B.C.G. was given to 31 children.

Health Education.—Health education was imparted through talks to individuals and groups. Demonstrations were held to educate the members on promotion of health and nutrition. The Health Visitors who were sent for training from the Government Health School and the Bala Sevikas took part in the health education and demonstrations.

Films on health and social education could not be screened due to want of a projecting screen.

Recreation.—Recreational activities both indoor and outdoor were provided for all age groups and both sexes. Volley ball and badminton were the main out-door games. Table tennis, carroms, boxing and weight lifting were the in-door games. The dramatic troupe put up a drama at the Raja Annamalai Hall on 12-2-1964.

Handicrafts.—17 women have been using the only sewing machine provided at the women's section. As more women are eager to learn sewing, one more machine is very badly needed so as to ease the strain on this single machine.

154 garments belonging to the centre were mended and 1,127 garments were stitched by the members, thus saving tailoring expenses. Crochet, embroidery work, rag doll making and paper flower cutting were also taught.

Personal Hygiene.—Members who lacked water facilities provided at the centre and took their daily baths and washed their clothes. Free soap was provided to them.

Home Visits.—163 home visits were made to the member families homes. Many of the members have shifted to places far from the centre and to approach their homes without a suitable transport is the present problem. Moreover the Welfare Organiser of the Boys Section was retired in June, 1962 and so far no one has been appointed in his place. Hence the work had to be curtailed.

The object of home visiting was to foster a good relationship between the workers and the families, so that the families would develop a greater confidence on the worker. Together with this the follow up work of infants, pregnant mothers, the sick, and the convalescing were also done. In addition the home visits enable the worker to study the socio-economic and environmental condition of the families.

Creche.—This Section is intended to look after children between 3 months and six years of working class mothers, chronically ill mothers and widowers. The children were brought to the centre between 7-30 and 9 a.m. and taken back home between 4 and 5 p.m. The creche was closed on Fridays and Government holidays.

Work of the Creche:

1. *Personal hygiene.*—Children on arrival in the mornings were given baths and a change of dress. Attention to their nails, hairs and skin were also given.

2. *Nutrition.*—Children under 1 year were given cow's milk 3 times a day and others were given conjee in the mornings, rice, vegetable, dhall and butter milk during the midday and bread and cow's milk in the afternoons. Each child received a plantain and an egg once a week.

3. *Education.*—Nursery equipments have been provided and a trained nursery teacher imparted nursery education to children between 3 and 6 years.

4. *Recreation.*—The children have been provided with plenty of toys for them to play but a slide and ladder made out of concrete is essential for out-door activities.

5. *Medical aid.*—Every morning the midwife in charge inspected every child and those that needed medical attention were shown to the doctors and the necessary treatment given. Every month the children were given a health check up.

6. *Immunization.*—1. Vaccination against small-pox.

Primary	..	10
Secondary	..	23
2. T.A.B.	..	39
3. Triple antigen	1st dose ..	44
	2nd dose ..	44
	3rd dose ..	37
4. Manteaux test:	Total No. tested ..	38
	Manteaux positive ..	22
	B.C.G. ..	16

7. <i>Attendance.</i> —No. of children on rolls on 1-1-1964	..	57
No. of children admitted during the year	..	44
No. of children removed during the year	..	43
No. of children on rolls on 31-12-1964	..	58
Average daily attendance	..	43

Six children were admitted in elementary schools after the completion of their 6th year.

519 general check-ups were done. Respiratory diseases, skin diseases, worm infestations and deficiency diseases were more predominant. Among the infectious diseases there were 2 cases of measles and 3 cases of chicken-pox. Two children had congenital heart disease. One child had poliomyelitis. Five children who had primary complex were treated.

Laboratory Investigation:

<i>Blood:—</i>	Total :	..	37
High WBC		..	30
Eosinophilia		..	23
Low HB%		..	3
<i>Motion:—</i>	Total :	..	36
Round worn ova		..	27
Giardiasis		..	2
Entamoeba Histolytica		..	2
Bacillary dysentery		..	1

Two children who contracted diarrhoea after measles died.

Maternity Service.—Twenty members underwent ante-natal examinations and 15 delivered at the centre.

Family Planning.—During the year 22 women took to family planning aids. One woman underwent salpingectomy. Four men were using sheaths.

II. Curative Health Services.—Minor oilments and injuries were treated at the centre's dispensary and major ailments were referred to the Government hospitals for treatment or for admission as an inpatient. The medico social worker followed the patients at the hospitals.

III. Social Activities.—Pongal was celebrated by distribution pongal to children.

Republic Day and Independence Day were celebrated by flag hoisting followed by distribution of sweets to children.

Under the joint auspices of the Indian Council of Child Welfare and the Corporation of Madras a healthy baby competition was held in all the Child Welfare Centres. The final competition was held at Ashok Vihar on 17-2-1964 when Srimathi Dr. H.M. Sharma, Director of Public Health, presided and distributed the prizes to the winners. Two babies born in Ashok Vihar Maternity Home received a 1st and 2nd Prize.

On the Tamil New Year's day the Department of Animal Husbandary distributed milk to about 2,000 children.

Navarathri was celebrated with display of dolls and hand work. Every evening the children had a merry time singing and dancing.

Marriages.—Two members got married during the year.

Deaths: Total : .. 10

Under 1 year	..	3
Between 1 and 12 years	..	5
Adults	..	2

Causes of death:

Post measles complications	..	2
Vomiting and diarrhoea	..	4
Nutritional deficiency	..	2

Adults:

1. Pulmonary tuberculosis	..	1
2. Complication of gastro jejunostomy	..	1

Jobs.—F.R. No. 302, Malliga whose father deserted the family when she was studying in the IInd Form completed S.S.L.C. through the help rendered by the centre and she has a job in the N.C.C. Office with which she is supporting the family.

3 boys were provided with jobs in the N.M.E.P. Section.

6 men were provided with temporary jobs in the S.I.A.A. Park Fair Exhibition.

Milk Distribution.—A total of 1,070 lbs. skimmed was used for distributing milk to the following:

Infants	..	5
Children under 6 years	..	11
Children above 6 years	..	30
Expectant mothers	..	6
Nursing mothers	..	6
Sick and the convalescing	..	3

II. Service to the local public:

(a) *Dispensary service.*—A total of 69,605 received treatment at the centre's out patient department.

Health Centre	..	47,395
Maternity Section	..	9,813
Peripheral Pediatric Clinic	..	12,397
		<hr/>
		69,605
		<hr/>

(b) *Triple Vaccine.*— Total No. of children .. 3,367

No. of children who received only one injection	..	2,042
No. of children who received two injections	..	797
No. of children who received three injections	..	528

232 children who started their course in the later months of 1963 completed the course in 1964.

(c) Peripheral Wing of the Government Paediatrics Department:

<i>Clinic:</i>	New cases	..	982
	Old Cases	..	11,415
<i>Laboratory investigations:</i>		..	271
<i>Nutritional classes</i>		..	52.850 mothers attended.
<i>Home visits</i>		..	507

Approximate percentage of diseases treated :

Primary complex	..	30%
Respiratory infection	..	30%
Dysentries and diarrhoeas	..	15%
Nutritional diseases	..	10%
Skin diseases	..	4%
Ear, Nose and Throat diseases	..	2%
Eye diseases	..	1%
Anaemias	..	4%
Helminthic diseases	..	4%

(d) Maternity Service:

No. of ante-natal examination done at Ashok Vihar	..	603
No. of deliveries conducted at the centre	..	719
No. of deliveries conducted at Government Hospitals	..	37
No. of deliveries conducted at home by centre's mid-wives	..	77
No. of deliveries conducted by untrained persons	..	3
Total	..	836

Diseases noted in Ante-Natal Examinations :

Hypertension	..	7
Valvular disease of heart	..	1
Pulmonary tuberculosis	..	1
Albuminuria	..	1
Pre-Eclamptic Toxaemia	..	2
Deficiency diseases	..	33
Anaemias	..	152
Syphilis	..	18

Of the 18 cases of syphilis 13 under complete course of treatment, 2 partial and 3 did not take any treatment.

Maternal mortality	..	Nil
Infant Mortality rate	..	91

There were 5 twins, 7 still births, 3 maceraed foetus and 17 pre-mature babies.

(e) Family Planning Service:

947 women have been following contraceptive methods continuously throughout the year.

Foam tablets	..	664
Sheaths	..	280
Preceptin jelly	..	3

Two women underwent salpingectomy.

III. Service to personnel in the Medical, Nursing and Social fields :

The 4th and final year students of the Madras Medical College were given placement with 2 families each to follow and record their socio-medical work.

House Surgeons from Stanley Medical Hospital and Kilpauk Medical Hospital were given training for a month in batches.

Health Visitor trainees from the Government Health School were given a months training in 2 batches.

Student Nurses from the Government General Hospital and Women and Children Hospital also underwent training.

Lectures on positive Health were given to personal undergoing training at the Orientation Training Centre, Poonamallee. The 6th Form girls of the Kalyanam Girls High School continued their work in the creche to learn mother craft.

Five batches of Balasevikas were given training each for 15 days.

Child attenders from Seva Samajam Girls Home underwent training in the creche for a month.

The following also visited the centre and lectures on the working of the same were given:

(1) The 4th final year students of the Madras Medical College, Stanley Medical College, Kilpauk Medical College, Madurai Medical College, Bangalore Medical College and Mysore Medical College.

(2) Sister Tutors from Christian Medical College, Vellore and Government General Hospital.

(3) Home Science Students of S.I.E.T. and Q.M.C. Colleges.

(4) B.T. Students from Meston College.

(5) Gramasevikas from S.V. Nagaram.

(6) Students undergoing training in Nutrition Research Centre, Hyderabad.

Gifts, Grants and Donations:

(1) The State Government was pleased to grant a sum of Rs. 10,000.

(2) Out of the interest accrued on the donation of Rs. 1,000 made by Sow. Neelambal Sisus Samrakshna Ksheera Dharma Endowment Milk was supplied to the children in the creche.

(3) Mrs. Kandaswamy distributed 6 pairs of half pants and shirts to six deserving boys in the creche. A bun and a plantain also were distributed to each child.

(4) The British Information Service continued to supply back numbers of periodicals.

The authorities of the Corporation of Madras, the staff and members of Ashok Vihar are grateful to the above.

2. COMMUNITY CENTRES

The Health Department continued to maintain the Community Centres constructed in the year 1961 at St. Xavier Street and in the year 1963 at Dr. Besant Nagar, during the year under review. During the year 125 and 107 functions were performed at Seven Wells Centre and Dr. Besant Nagar (Bogipalayam) Centre respectively as detailed hereunder.

S. No.	Name of function	Functions conducted at	
		Seven Wells	Dr. Besant Nagar
1	Marriages ..	64	78
2	Dinners ..	23	9
3	Puberty ceremonies ..	17	10
4	Ear boaring ceremonies ..	2	5
5	Betrothal ..	1	2
6	Seemantham ..	5	2
7	Birth Days and Cradling ..	2	..
8	Sunet Marriage ..	1	1
		125	107

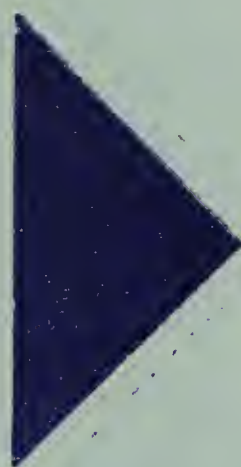
As both the Centres gained much popularity and as there is great demand from all quarters of the City, action has already been taken to construct Community Centres at the following places:—

Division No.	Location of the proposal Community Centre
8	North Madha Church Street, Royapuram.
41	Sundara Raja Perumal Koil Street, Sembium.
53	Meenambal Sivaraj Nagar.
65	Chintadripet.
77	Meersahibpet, Triplicane.
81	Muthia Mudali Street, Teynampet.
94	Giriappa Road, T. Nagar.

The Construction of Community Centres at Meenambal Sivaraj Nagar, Chetput and Meersahibpet, Triplicane was all most completed and they will be opened shortly for public use.

SECTION-H

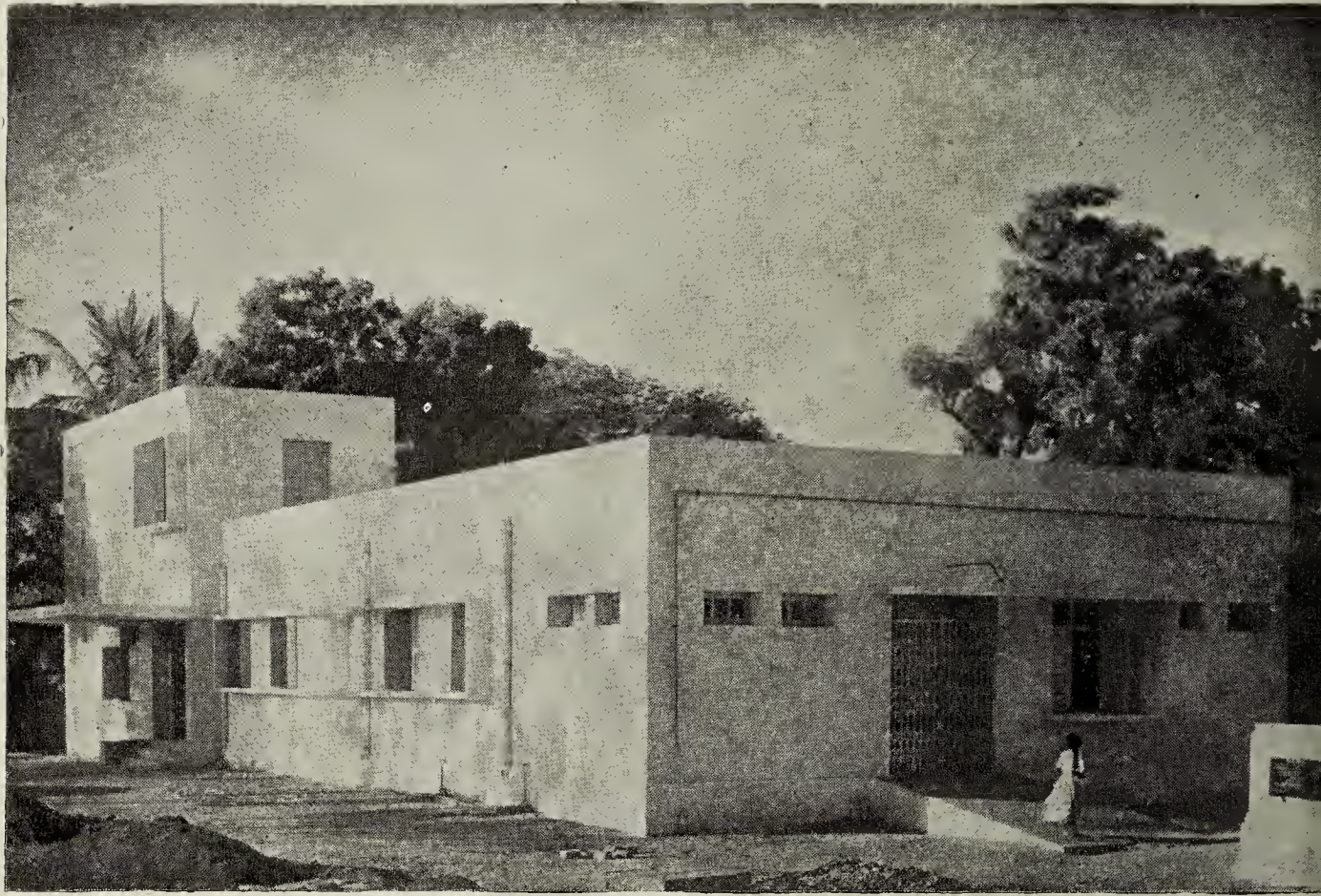
ARE OF THE MOTHER AND CHILDREN



SECTION-H

THE MOTHER AND CHILD

CHILD WELFARE SCHEME



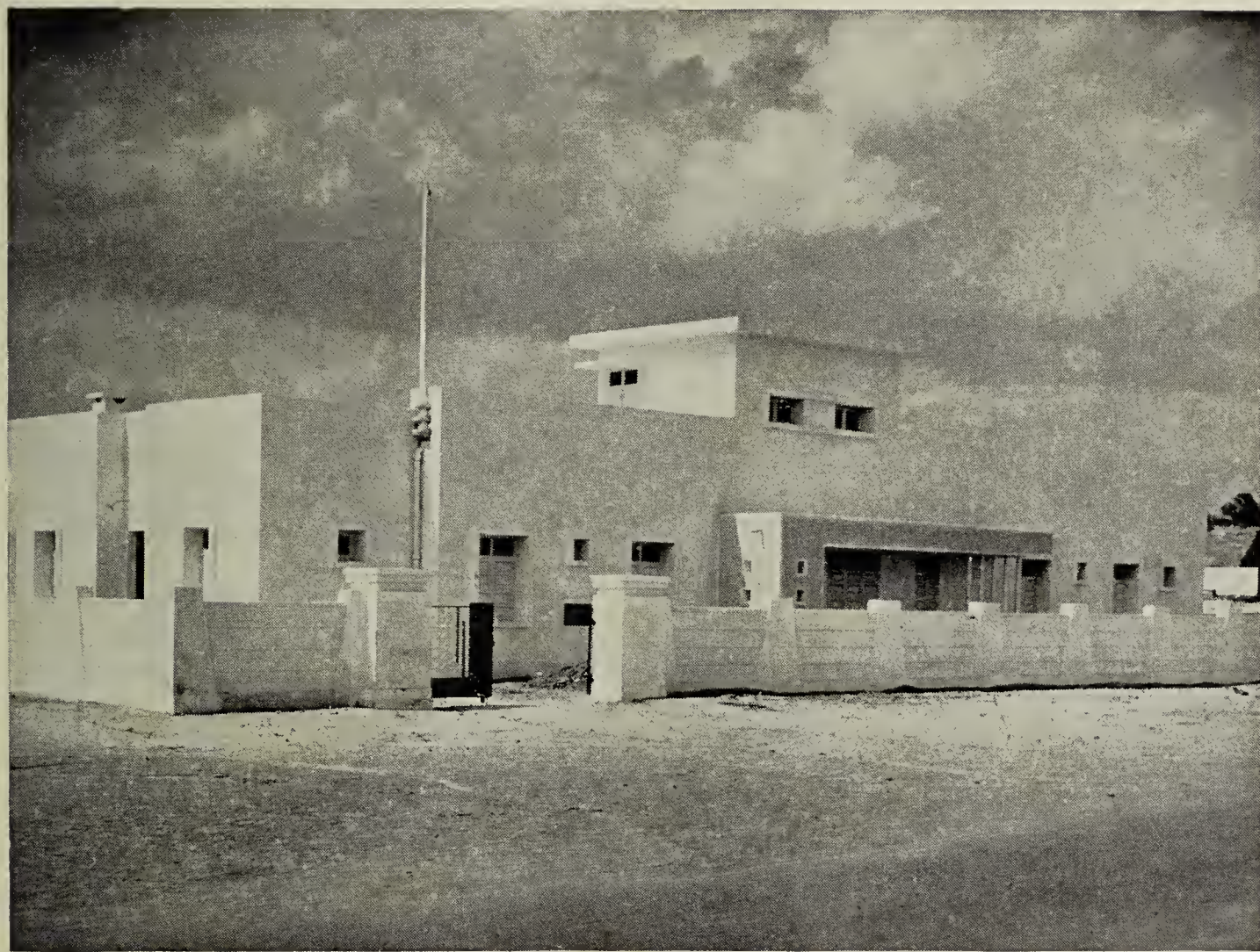
View of newly opened Child Welfare Centre at
Somaiah Raja St., Agaram.

CHILD WELFARE SCHEME



Ward attached to the Child Welfare Centre at Agaram.

CHILD WELFARE SCHEME



View of the newly opened Child Welfare Centre at
Kavingnar Bharathy Dasan Road.

1. CHILD WELFARE SCHEME

At the beginning of the year, there were 45 Child Welfare Centres with 22 Centres having beds. On 10th October 1964 a New Centre was opened at Agaram. The Sub-Centre at Basin Bridge was converted into a warded Centre from 21-12-1964. A new building at Bharathi Dasan Road with provision for beds for Teynampet Child Welfare Centre was also opened on 29-12-64. The existing sub-centre at Teynampet will be shifted to this new building. At the end of the year there were 46 Centres of which 25 are warded Centres with a bed strength 335. During the year under report there was slight increase in the maternal and infantile mortality rates—the rates were 0.76 and 83.46 per mille during 1964 against 0.49 and 81.89 per mille of the previous year.

Staff.—Dr. V.S. Krishnaswamy, M.B.B.S., D.M.C.W. (Cal.), C.P.H. (Lond.) continued in the office of Lady Superintendent, Child Welfare Scheme. There were 31 Assistant Surgeons, 53 Health Visitors, 11 General trained Nurses, 269 Midwives and 27 pharmacists.

Pre-natal Clinics were conducted in all the Centres regularly twice a week. At these clinics, the expectant mothers were given thorough medical check-up on their first visit and thereafter examined once a week or a fortnight as the cases required. Expectant mothers numbering 31,907 who attended the Clinics were given medical advice and treatment by the Assistant Surgeons as against 31,740 for the previous year. The expectant mothers who attended these clinics derived immense benefit from the advice and treatment given to them.

Serological Examination of blood of Anti-natal cases was conducted in all the warded centres. Treatment of positive cases were done free of cost. A statement is furnished below:

Total No. of blood samples examined	No. of positive cases	No. of posi- tive cases that took full course of treatment	No. of posi- tive cases that took partial treatment	No. of positive cases that did not turn up in- spite of persua- tion
15,908	513	210	60	243

Maternity Services.—Out of the total number of City Births during the year 27,677 labour cases came under the care and observation of the scheme as against 26,237 of the previous year. The births conducted in the wards during the year were 17,373 as against 15,638 conducted during the previous year. The number of home visits made by the Midwives were 1,75,167, by Health Visitors 1,80,443 and by Assistant Surgeons 25,429. Among the births that came under the care of the Child Welfare Scheme there were 215 twins, 4 triplets, 271 still births and 238 macerated and 14 dead born.

Ambulance Service.—Five Ambulance vans were in service. During the year under report, 2,715 cases requiring hospitalisation were transported in these vans to the various Government Maternity Hospitals in the City.

Neo-Natal Vaccination.—During the Year under report, 1,282 new born babies were vaccinated against small-pox at the Periapet Maternity Home and 124 at the Choolai Maternity home.

Eradication of Malaria.—Under the National Malaria Eradication Programme, blood smears were taken at Centres from all mothers with history of fever. The number of smears examined during the year were 2,815. On examination none of these were positive for Malaria.

Out-Patient Clinics.—The Assistant Surgeons conducted Out-Patient Clinics in all the Centres. At these clinics infants, pre-school children expectant mothers and nursing mothers were examined and treated for minor ailments—47,513 infants, 17,331 pre-school children, 32,079 expectant mothers and 58,959 nursing mothers represent the new cases that were treated and advised. The total attendance was 4,32,650 inclusive of 2,76,768 old cases.

Free Milk Distribution.—Cow's milk was continued to be supplied to ill-nourished infants and toddlers free of cost. The total number was 2,960. In addition Skimmed Milk Powder donated by the UNICEF was reconstituted and supplied free to deserving toddlers, expectant mothers and nursing mothers in all the child Welfare Centres.

Maternal Mortality.—Out of 27,677 labour cases that came under the care and observation of the Child Welfare Scheme there were 21 cases of mortality as against 13 cases among the 26,237 cases of labour conducted during the year 1963. Particulars are given below:

<i>Institution</i>	<i>Death during</i>	
	1963	1964
Child Welfare Scheme ..	4	1
Hospitals ..	8	19
Private Doctors ..	..	1
Vaidian ..	1	..
	<hr/> 13	<hr/> 21

The rate of maternal mortality worked out to 0.76 per mille in 1964 as against 0.49 per mille in the previous year.

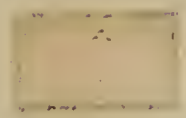
Infantile Mortality.—The total number of still births, macerated and dead born was 523 for 1964 against 520 for 1963 while the number of infants born for these years were 27,677 and 26,637 respectively. The number of infants kept under observation during the first year of life in 1964 was 25,717 as against 28,019 of the previous year. The mortality among live births during the year was 2,145 as against 2,297 of the previous year. The whereabouts of 2,253 children could not be traced. The infant mortality rate worked out to 83.46 per mille for the year 1964 as against 81.89 per mille for the year 1963.

Maintenance of Creches.—For the benefit of working class parents with a combined income of less than Rs. 50 four Creches were maintained. The working mothers left their children at the creches in the morning and took them back on their return from work. During their stay at the Creches the Children were given bath, fresh and clean clothing and nourishing food. They attended nursery classes, where action songs, story telling and prayer formed part of the programme and played indoor and out-door games. Their minor ailments were attended to by the Assistant Surgeons. The benefits of this Creche are extended to employees of the Corporation whose monthly income does not exceed Rs. 300 per mensem. The average daily attendance of children at the Grace Garden, Ammen Koil (North), Perumalpet and Chetpet Creches were 27, 11, 22 and 13 respectively.

SAVING PLANNING
SURGICAL METHODS

SCALE 1" = 100 FEET

RED (HILL)
(HILL) (HILL)
VULCANIZATION



FAMILY PLANNING **SURGICAL METHODS**

SCALE 1" = 100 PERSONS.



PUERPERAL
STERILISATION



VASECTOMY

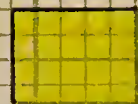


FAMILY PLANNING NON-SURGICAL METHODS

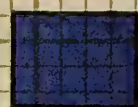
SCALE 1" INCH - 500 WOMEN



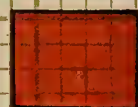
FOAM TABLETS



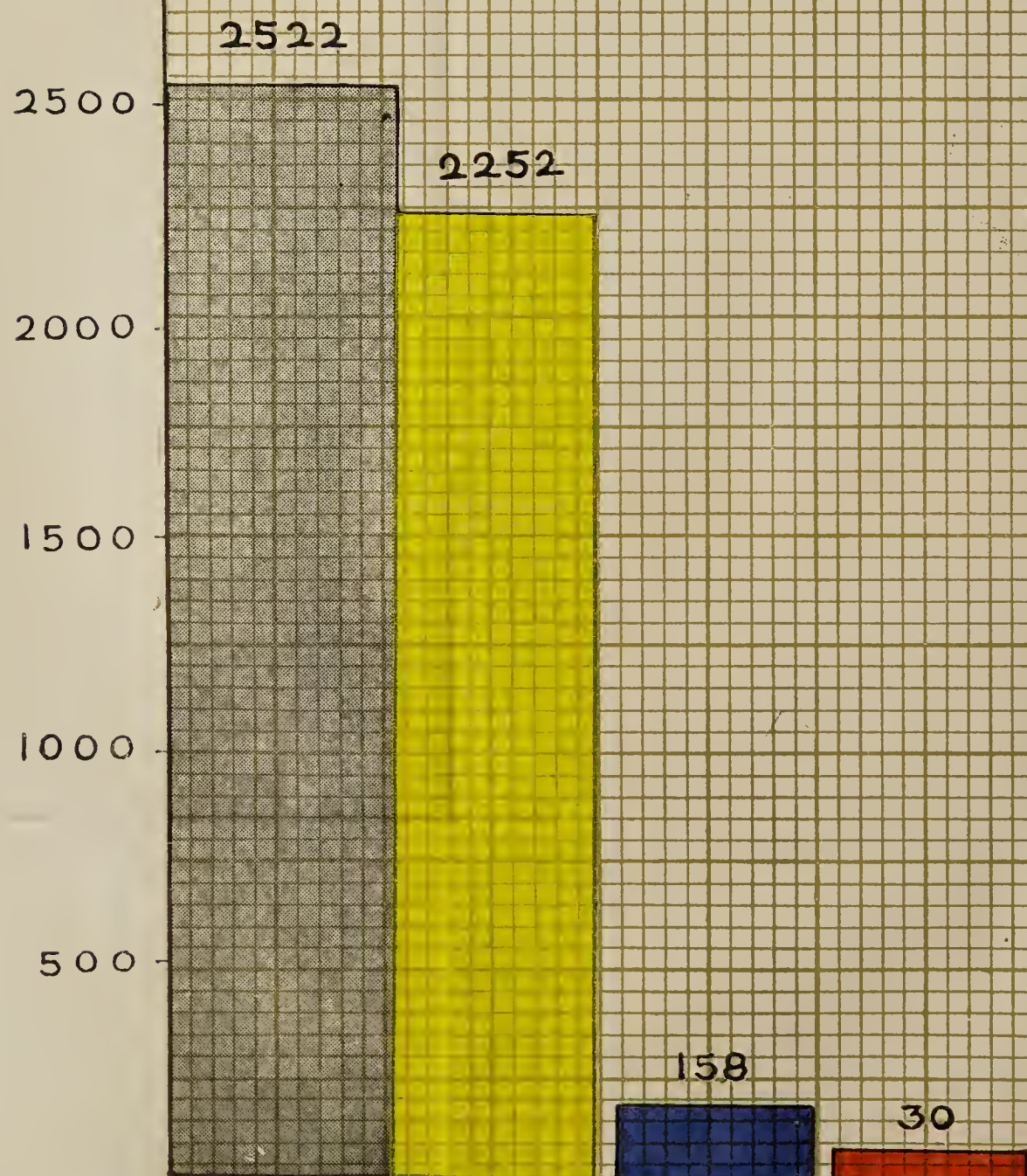
SHEATH



JELLY



DIAPHRAGM



WE CAN SAVE THE WORLD - 922A3 EV

FOR THE WORLD - 101-101-101

101-101-101

101-101-101

101-101-101

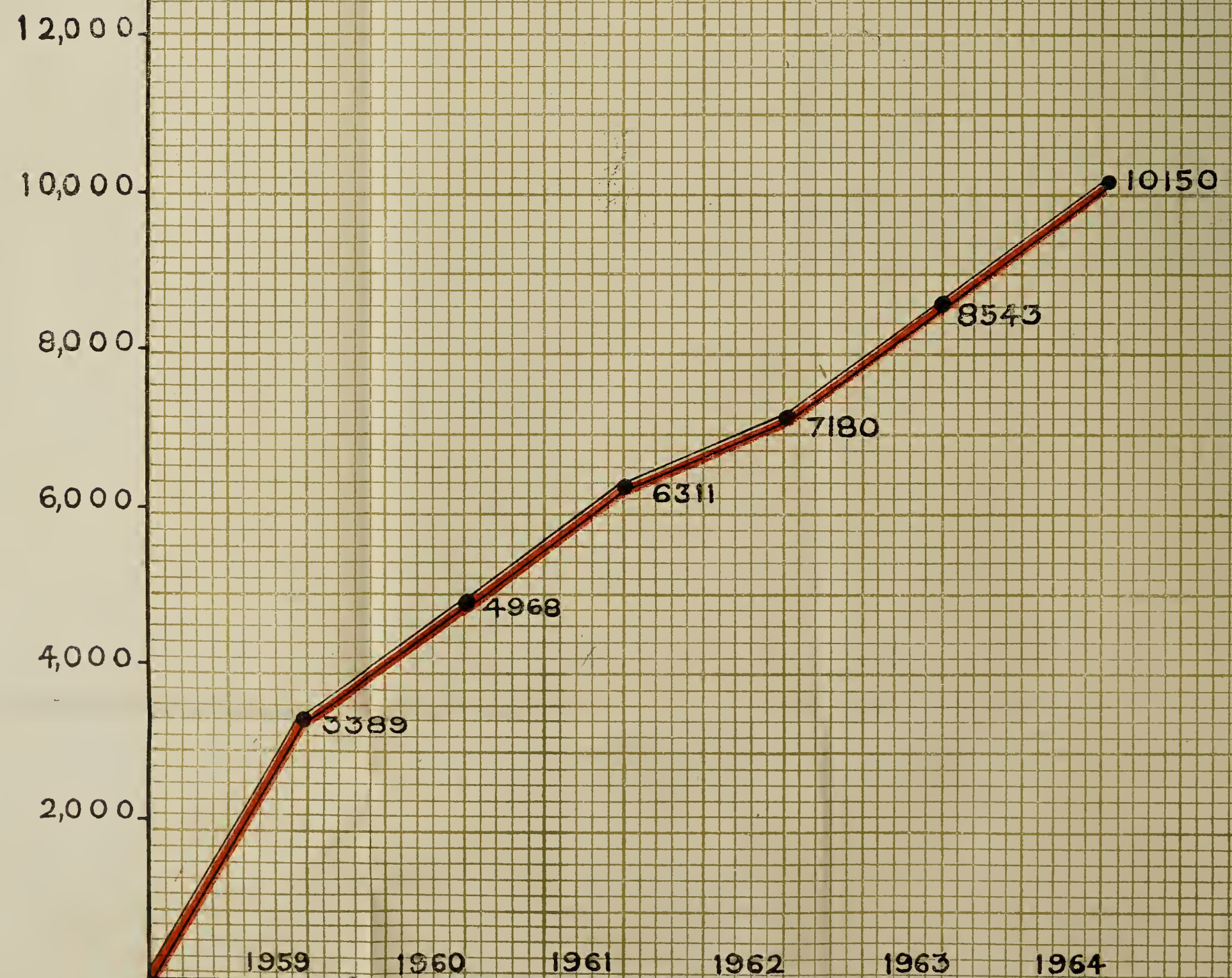
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ACTIVE CASES - FAMILY PLANNING

PERSONS FOLLOWING NON-SURGICAL
METHODS IN FAMILY PLANNING
REGULARLY

Scale 1" = 2000 persons.



Health Educator.—Special attention was continued to be bestowed on the preventive aspects and mothers were educated in matters relating, to Mother-Craft, Child Care, General Hygiene and prevention of diseases. Particulars of the Clinics conducted are shown below:

		No. Conducted	Attendance
Mother-Craft Classes held once weekly	..	3,823	38,996
Well-Baby Clinics held twice weekly	..	3,120	18,519
Group talks held twice weekly	..	5,034	32,386

The Guild of Service carried out an intensive Programme of Demonstration on Nutrition and Wheat. Periodical, Demonstrations on the ways and means for the preparations of inexpensive and wholesome food were given at all the Child Welfare Centres whereby mothers benefited to a considerable extent.

Baby Show.—As usual the Annual Baby Show and Competition was conducted during the year in co-operation with the Indian Council for Child Welfare. The Competition was open to children of low income group. The total number of children who completed from all the Child Welfare Centres was 789. The Competition was divided into 3 age groups, Viz. 1 to 4 months, 5 to 8 months and 9 to 12 months. First, Second and Third prizes were awarded to three age groups in each of the range besides the distribution of cloth bits measuring 1 meter each to all the runners-up numbering 96. There was a slight decreases in the average weights of babies, under each group. A comparative statement of weights is as follows:

		1963	1964
I Group from 1 to 4 months	..	12.85 lbs.	12.75 lbs.
II Group from 5 to 8 months	..	17.40 lbs.	17.33 lbs.
III Group from 8 to 12 months	..	19.81 lbs.	18.75 lbs.

2. FAMILY PLANNING SCHEME

The Intensive Family Planning Scheme sponsored by the Government of Madras and implemented by the Corporation continued to function during the year 1964. The entire expenditure on the Intensive Family Planning Scheme has to be reimbursed by the Government.

The achievements on the working of the Scheme are detailed below with comparative figures of the previous years.

The No. of house visits during 1964 were 1,00,376 as against 1,34,926 during the previous year.

The total No. of mothers contacted were 94,811 as against 1,04,244 during 1963.

The No. of Vasectomy and Salpingetomy operations were 89 and 355 as against 153 and 380 respectively, during 1963.

The quantity of the Contraceptive appliances supplied during 1964 were as follows:

(a) Sheaths	..	43,702
(b) Jelly	..	584
(c) Foam Tablets	..	13,693
(d) Applicators	..	97
(e) Diaphragm	..	32

There had been an increase in the supply of sheaths and foam tablets.

It can also be seen that though there had been a slight decline in the achievements, yet there had been considerable increases in the acceptance of non-surgical methods. The decline in the House Visits and Mothers contacted were due to some delay in posting substitutes in vacancies occurring in transfers of the Staff Nurses to their parental institutions namely the Government Hospitals.

1. SPECIAL HOME

The Corporation continued to maintain the special Home at Krishnam-pet during the year 1964 also for the diseased, infirm and disabled beggars roaming in the streets of the city who were convicted and committed by the courts and provisions of the City Police Act. They are provided with food, clothing and shelter besides other amenities. In addition to the above the inmates were also provided with medical aid both at the home and state hospitals.

The year began with a strength of 218 (158 males and 72 females) on 1-1-1964 and ended with a strength of 663 inmates (505 males and 197 females).

Table I

<i>Particulars</i>		<i>Male</i>	<i>Female</i>	<i>Total</i>
Strength on 1-1-1964	..	158	60	218
Admission during the year	..	347	98	445
		<hr/>		
Total	..	505	158	663
		<hr/>		
Discharge	..	201	56	257
Release	..	105	58	163
Death	..	6	9	15
Escapes	..	91	6	97
Government City Hospital Admission		12	4	16
		<hr/>		
		415	133	548
		<hr/>		
Total during the year	..	505	158	663
Disposals	..	415	133	548
		<hr/>		
Balance during the year	..	90	25	115
		<hr/>		
Returned from hospitals	..	4	2	6
		<hr/>		
		94	27	121
		<hr/>		

Table II

Admissions according to ages:

10 to 20 years	..	34
21 to 30 "	..	118
31 to 40 "	..	152
41 to 50 "	..	60
51 to 60 "	..	45
61 to 70 "	..	22
71 to 80 "	..	9
81 to 90 "	..	4
91 to 100 "	..	1

Table III

Admission to City Hospitals:

1. Infectious Diseases Hospital	..	3
2. Government General Hospital	..	3
3. Government Stanley Hospital	..	2
4. Government Royapettah Hospital		4
5. Government Kasthuribah Hospital		4
		<hr/>
Total	..	16



SECTION-I

CARE OF THE OLD INFIRM AND DESTITUTE

SECTION - I

Q. 1. Write short notes on the following:

Table IV

Cause of death is given below:

		<i>Male</i>	<i>Female</i>	<i>Total</i>
Pulmonary tuberculosis	..	3	1	4
Chronic enteritis	..	1	2	3
Dysentery dability	..	1	1	2
General dability	..	..	2	2
Anamia	..	1	..	1
Hypertentive failure	..	..	1	1
Septicamia and old age	..	..	1	1
Suicide	..	..	1	1
Total	..	6	9	15

There were less number of admissions during the year under report than the last year and less cases referred to city hospitals as most of the cases responded to usual line of treatment. Only those requiring special treatment like surgery i.e. removal of toes and fingers. Some of the city hospitals do not admit the inmates of the Special Home, as some were in the habit of escaping with the hospital linen supplied to them, if they were admitted.

Discharges, Release and Escapes:

There were more number of cases discharged during the year 1964 than the last year. But the visitors like the Collector of Madras and Director of Public Health suggested that the inmates should not be discharged even after their term is over unless they are declared negative and cured.

Deaths:

During the year under review 6 men and 9 women died in the home.

Escapes:

Compared to last year there were more number of escapes during the year under report, which was very high. This was mainly due to some vulnerable spots in the Special Home and also due to the small number of warders, when compared to the area of the Home to be covered. Escapes were due to the inefficiency and carelessness of some warders.

General:

There was no mental cases of any importance and no epidemic during the year under report.

Repairs to the wards like roof, and provision of enclosures were completed during the year 1964.

Some more suggestions for improvement like increasing the height of the wells around the Special Home, improving water supply to A.C. to prevent frequent failures, covering the gate to prevent outsiders having contact with the inmates, construction of ratproof godown for provisions and a store room for all the wards were asked to be provided with doors to enable the inmates to be locked during the nights. There was also proposal for completely white washing and painting the Special Home as it was a long time since this was done. If those improvements are done, the Home will present a better appearance and escapes also can be minimised.

Table V

		<i>Men</i>	<i>Women</i>	<i>Total</i>
1.	Skin diseases ..	90	4	94
2.	Blindness ..	1	1	2
3.	Tropic ulcer ..	25	3	28
4.	Deafness ..	1	1	2
5.	Tuberculosis ..	5	3	8
6.	Peralysis ..	1	1	2
7.	Mental ..	2	2	4
		125	15	140

Table VI

Conditions in healthy cases:

1.	Blindness ..	1	3	4
2.	Peraplegia ..	10	11	21
3.	Cardinovascular complications ..	12	10	22
4.	Respiratory ..	2	1	5
5.	Mental ..	25	25	50

Official Visitors:

The following official visitors visited the Home during the year and suggested improvements and provision of amenities, which were taken up immediately.

	<i>Official Visitor</i>	<i>Date of visit</i>
1.	Collector of Madras ..	31-1-1964
2.	Chief Presidency Magistrate ..	30-3-1964
3.	Assistant Director of Public Health ..	20-6-1964
4.	Dy. Commissioner of Police (Crime) ..	28-7-1964
5.	Jail Superintendent ..	29-8-1964
6.	Chief Presidency Magistrate ..	30-9-1964
7.	Collector of Madras ..	10-12-1964
8.	Assistant Director of Public Health ..	23-12-1964

Garden:

Much improvement could not be made, as there was no gardner during the year under report. One gardner who knows the work was asked for to do gardening. The inmates were taught and the garden was improved to a certain extent.

Occupational Therapy:

The able bodied inmates were taught weaving and gardening.

Weaving Section:

There were not many inmates forthcoming to do weaving as they wanted remuneration atleast Rs. 5 per month or at least Rs. 2. Due to this, only 200 yards of vabdage was prepared from 6 lbs. of raw material at a cost of 2-50 Ps. per lb. was woven and thereby realised only Rs. 80 on the finished articles.

HOME FOR HOMELESS

The Homes for homeless are mainly intended to house temporarily the people coming from mofussil places in search of employment in the city. During the year all the Homes were occupied fully and there was a great demand for accommodation.

The detail information of the Homes are given below:

S. No.	Dn. No.	Circle No.	Location of Homes	Accommodation available for persons	Strength Maintain
1.	13	2	Ibrahimjee Sahib Street	120	120
2.	27	3	131, WallTax Road	60	60
3.	35	4	Dayasadan, Konnur H. Road	350	350
4.	51	6	St. George Orphanage School	300	208
5.	51	6	Bala Vihar, (T.P.) Chatram Shenoy Nagar	150	100
6.	52	6	Mercy Home, Halls Road, Kilpauk	200	125
7.	70	7	Ritchie Street	200	200
8.	80	8	Gajapathy Lala Street	15	15

THE VETERINARY DISPENSARIES

Five Veterinary Dispensaries are run by the Corporation of Madras to cater the needs of the Public in different parts of the City.

1. Veterinary Dispensary, 'B' Cattle Depot—Basin Bridge.
2. Veterinary Dispensary, 'D' Cattle Depot—Pudupet.
3. Veterinary Dispensary, 'F' Cattle Depot—Mylapore.
4. Veterinary Dispensary, 'G' Cattle Depot—Perambur.
5. Veterinary Dispensary, 'H' Cattle Depot—Nungambakkam.

The dispensaries are getting very popular year by year. The Government Animal Husbandry Department had started Artificial Insemination Centres at B, F and H dispensaries which are giving very good service to the Madras Milkmen and the Public who keep milk animals in those centres.

1. VETERINARY SERVICES

Veterinary Dispensaries 1964

Name of Veterinary Dispensary	Bovines			Equines			Others			Grand Total
	New	Old	Total	New	Old	Total	New	Old	Total	
B. Depot	4,911	4,398	9,309	2	Nil	2	1,906	1,218	3,124	12,435
D. Depot	2,247	2,028	4,275	Nil	Nil	Nil	1,821	1,761	3,582	7,857
F. Depot	4,456	2,922	7,378	4	3	7	1,919	2,693	4,612	11,997
G. Depot	2,122	1,556	3,678	Nil	Nil	Nil	456	242	698	4,376
H. Depot	4,302	3,559	7,861	8	6	14	3,949	2,230	6,179	14,054
Total	18,038	14,463	32,501	14	9	23	10,051	8,144	18,195	50,719

Amount		Artificial inseminations				Casterations done	
Collected	Rs. Ps.	Depot	Cows	Baffaloes		in the Despensa- ries	.. 6
B. Depot	18 50	B. Depot	795	447			
D. Depot	33 75	D. Depot	..	..		Specimens sent to the Veterinary College	.. 5
F. Depot	176 25	F. Depot	1086	529			
G. Depot	22 00	G. Depot	..	..	
H. Depot	111 00	H. Depot	966	514			
Total	<u>361 50</u>		<u>2847</u>	<u>1490</u>			



SECTION-J

CARE OF THE ANIMALS

SECTION-1

CHANGING THE 30 BRAC

**Statement of sick animals Disease war treated at the Cattle Depots
during the year 1964.**

Name of the Depot	Yoke Call and Yoke Diseases	Old age & debility	Lamenness	Medical cases	Other cases	Foot & mount	Surgical cases	Total
A. Depot ..	34	42	22	7	7	11	12	135
B. Depot ..	46	39	19	12	19	15	10	160
C. Depot ..	56	25	12	16	18	..	6	133
D. Depot ..	21	6	5	16	5	9	4	166
E. Depot ..	52	14	6	45	7	10	3	137
F. Depot ..	39	10	5	22	10	45	6	137
G. Depot ..	41	10	3	19	16	..	5	94
H. Depot ..	36	14	6	17	12	10	7	102
I. Depot ..	53	12	5	13	6	5	9	103
Total ..	378	172	83	167	100	105	62	1,067

II. ZOOLOGICAL GARDENS

It is a recognised fact that the existing Zoological Garden at People's Park, though small, is very popular. During the calendar year 1964 under report, attendance to the institution was on the increase. It was not the local people only visited, but mostly from out station, people visited in large number. On an average about 1,000 adults and 400 children visited the institution daily.

For the last three years, there were proposals for shifting the one hundred and ten year old Zoo. It was for expanding its accommodation and for maintaining under healthier surroundings all the live stock in captivity. It was considered that coal smoke from the railway yard impaired their health. Experts after careful examination and determined that even though all the animals were under the same environmental stress, only the antelopes and deer were found affected by the coal smoke. They were now arranged to be kept in enclosures away from the adjunct smoke yard. In the meanwhile a belt of trees, especially 'Eucalptus hybrid' was raised for rapid growing, so that the hazard from coal dust might be minimised.

It is to state that in memorandum No. 152416/M1/59-II R.D. & L.A., Department dated 27-12-1961, the Government had turned down the proposal to shift the existing institution to Guindy Estate, as that would affect further dereservation of the forest Deer stock. The other sites proposed for the new Zoo at Velacheri near Tambaram and at Arumbakkam were deemed unsuitable for the favourable habitat of the captive animals. Besides, it was doubted whether inspite of all efforts to improve the sites, they would get that delightful colour and apperance as the present institution had at People's Park. A

survey of wells the plots at Arumbakkam revealed that the yield of water with electric pump sets was not copious and continuous to meet the needs of the institution and specially during summer, they go dry.

It was decided, therefore to extend the present accommodation of the live stock at People's Park and to utilise the available vacant space along side west and adjoining it.

Distinguished visitors.—1. Sri K.K. Nathan, Conducting Officer, Malayasian Cultural Workers Study Tour, Kola Lumpur, Malayasia visited on 30-1-1964.

2. Sri M. Ahmed, Ex.Officio Director, Hyderabad Zoological park, Andhra Province, visited on 5-3-1964.

3. Raja S.V. Janardhana Rao, Raja of Kirlampudi Sri V.R.K. Ranga Rao and their party visited on 22-3-1964.

4. The Director, Fortworth Texas Zoo, visited on 30-3-1964.

5. Mrs. Stephanie Lehmanu, London, N.W.6., Wethamstead, visited on 28-8-1964.

6. Dr. Nixiforora, U., Dr. Shaburov, M., and Mrs. Alexandrora, E., Moscow, U.S.S.R., visited on 2-10-1964.

Live stock.—At the beginning of the calendar year 1964, there were 215 mammals, 381 birds and 13 reptiles. There were certain additions by births and gifts. The total worked out to 45. Besides, there were disposals by sales and deaths, during the year under report.

The following statement will furnish details for the calendar year ended with the 31st December 1964:

Particulars	Additions			Disposals		Balance as on 30-12-64
	Stock as on 1-1-64	Births	Gifts	Sales	Deaths	
1. Mammals	215	35	1	9	43	199
2. Birds ..	381	10	..	..	41	350
3. Reptiles ..	13	..	2	..	..	15
	609	45	3	9	84	564

Additions.—By Gifts: During the calendar year, the Madras Government Fisheries Department offered for the Zoological Garden two crocodiles young ones captured at Bhavanisagar. A female black Nilgiri Langur was offered as gift by one Sri S. Ramanujam, Egmore.

By Births.—There were the following births and hatches during the calendar year.

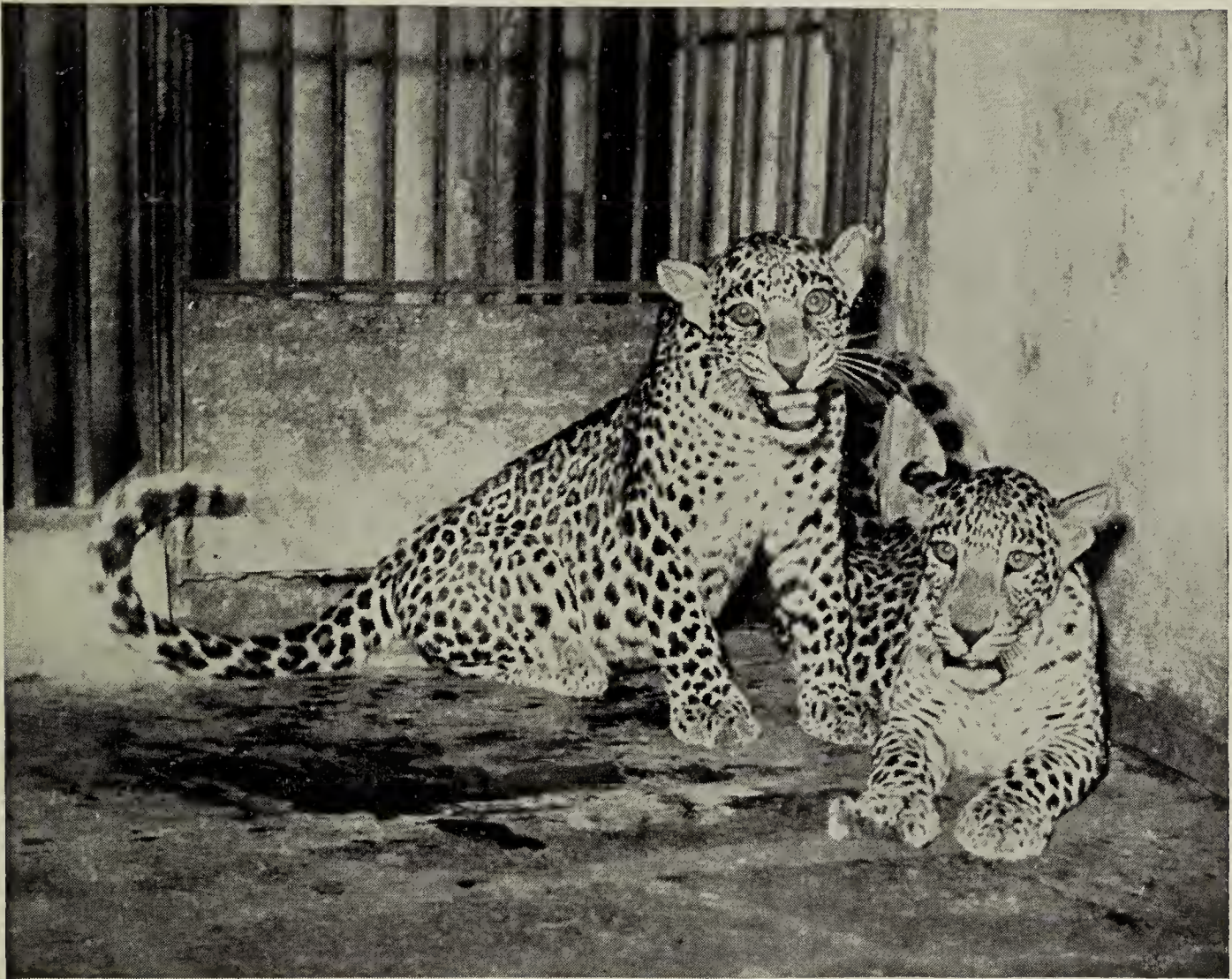
12 Guinea Pigs.
2 Leopard cubs.
2 Nilgai Antelopes.
10 Pigeons of sort.
2 Rabbits.
3 Sambar Deer.
4 Tiger Cubs.
10 White Rates.

ZOOLOGICAL GARDENS



Ocean Wave Merry-Go-Round incorporated in the Children's section of the Zoological Gardens Chimpanzee 'Zippy' enjoying rides with children in the section.

ZOOLOGICAL GARDENS



Leopard Cubs "Lava" and "Kusa" born for the Leopardess "Spotty"

By purchase.—The procedural import and export control laid down from time to time rendered it difficult to acquire more of diverse species during the period.

Depeletion.—By death.—Tuberculosis was one of the commonest chronic diseases amongst the hoofed mamals and it had been the cause for most of the deaths in the Zoo.

The death for the calendar year worked out to 11% .

Improvements.—The work of construction of four enclosures with roosting cages for the breeding of the South America, Macaw Parrots taken up in December 1963, is nearing completion.

2. An Ocean Wave Merry-go-round set was installed in the Children's playground, inside the Zoological Garden, to enlighten the visiting school children.

Finance.—The right of collection of fees for admission of visitors and for cycle stand at the entrance of Zoological Garden was let for the financial year 1964-65 for a sum of Rs. 1,72,000 on contract. The right for plying Pleasure Boats and punts in the lake inside the Zoological Garden was offered for Rs. 8,500 for the year beginning with 1-4-1964. The contract for running the Cafe inside Zoo was given for an amount of Rs. 12,000 for the year 1964-65. Besides, there were other miscellaneous collections for admission of cars, sales of animals, admission of amateur still and cine cameras, etc., as usual.

Wild Life Week.—In accordance to the instructions issued in G.O. Ms. No. 2678 dated 22-9-1964, a colourful procession of wild animals was taken out from the Zoological Garden on 2-10-1964 round the Rountana main thorough fares, between 4 p.m. and 6 p.m. The attractions in the procession which formed part of the State Wild Life Week celebration were a pair of young Chimpanzees 'Zippy' and 'IVy' Lion 'Nelson', Tiger quad cubs, a pair of Myaenas and a pair of African Crowned Cranes, besides elephant 'Kamala' and Camel 'Ranjani'.

Improvements Committee.—The Zoo Improvements Committee met three times during the calendar year on 3-1-1964, 7-7-1964 and 14-9-1964 and it decided ultimately to extend the present accommodation of the live stock in the Zoological Garden at the People's Park, as far as possible utilising the available vacant space alongside west and adjoining the institution and it desired to draw out a master plan for improvements at a cost of Rupees ten lakhs, spread over a period of five years, utilising at the rate of Rupees Two lakhs per year.

MISCELLANEOUS

(i) *Dhobykhanas*.—In order to prevent washing of cloths in dirty, contaminated and stagnated waters which may transmit disease to human beings, the Corporation continued to maintain dhobykhanas in the City, which are Provided with all facilities for washing, drying, ironing, etc. The dhobykhanas are periodically inspected by the Health Officer and his Executive staff and improvements are effected wherever necessary.

The particulars of location and number of stones provided in each Dhobykhana in the city are furnished below:

S. No.	Dn.	Circle No.	Location	No. of stones provided
1.	1	1	Buchiammal Street	.. 40
2.	1	1	Irusappa Maistry Street	.. 42
3.	9	1	Robinson Park, Cemetery Road	.. 42
4.	43	5	Ekangipuram Ist Street	.. 6
5.	44	5	Pudu Nagar, Ayanavaram	.. 12
6.	48	5	Conron Smith Nagar	.. 52
7.	54	6	Mc. Nichols Road, Chetput	.. 122
8.	54	6	Pilliar Koil Street, Chetput	.. 36
9.	64	7	People's Park	.. 6
10.	82	9	Apparsamy Koil Street, Mylapore	.. 15
11.	98	10	Razack Sahib Street	.. 60

(ii) *Swimming Pools*.—The two swimming pools, situated at Marina Beach and People's Park continued to facilitate the young in learning swimming with the help of the instructors posted there for the purpose. In order to meet the demand proposals for construction of another swimming pool at Shenoy Nagar was also approved and construction was taken up during the year.

(iii) *Blood Meal*.—Blood meal manufacturing centre at Kodungaiyur was working as in the previous years. Dried blood was sold during the year for Rs. 12,750 and there is also a stock about 10 Tons kept ready for disposal. The Pharmaceutival firm was permitted to continue collection of fresh blood on payment of charges. During the year Rs. 12,300 was realised.

CORPORATION OF MADRAS

INSTITUTIONS UNDER THE HEALTH ADMINISTRATION
DURING 1964

Health Department—Central Office

Telephone
Numbers*Hospital:*

Infectious Disease Hospital, Thiruvottiyur High Road, Tondiarpet	..	51036
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Laboratories:

Public Analyst's Laboratory, Ripon Buildings, Madras	..	39171
Public Health Clinical Laboratory, Ripon Buildings, Madras-3	..	39171
Water Analyst's Laboratory, Kilpauk Water Works, Madras-10	..	61197
Malaria Laboratory, Trevelyan Basin Water Works Street, Madras-1	..	..



SECTION-K

MISCELLANEOUS

SECTION-K

MISCELLANEOUS

*Telephone
Numbers*

Other Institutions:

Ashok Vihar, Health and Recreation Centre, People's Park, behind Moore Market, Madras-3	..	33259
Zoological Garden, People's Park, Madras-3	..	31414
Lethal Chamber, Basin Road, Madras-2	..	33192
Special Home, Krishnampet, Madras-5	..	86377

Midday Meals Centres:

Basin Bridge Road, Kondithope, North Range	..	..
Iya Mudali Street, Chintadripet, Central Range	..	85763
Conran Smith Road, Gopalapuram, South Range	..	..

Slaughter Houses:

Sheep and Cattle—

Gantz Road, Perambur Barracks, Madras-12	..	..
Alandur Road, Saidapet	..	32027

Pigs—

Junction of Basin Road and Pulianthope High Road	..	..
Alandur Road, Saidapet	..	..

Miscellaneous:

Hearse—

Corporation Lorry Station, Anna Pillai Street, George Town, Madras-1	..	31837
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Community Centre:

St. Xavier Street, Seven Wells, Madras-1
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Senior Entomologist:

N.M.E.P. At Ashok Vihar, People's Park	..	33259
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Health Department

I CIRCLE

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Dispensary</i>	<i>Location</i>
<i>General Dispensaries:</i>			
1	1	New Washermanpet.	10, Avoor Muthiah Street, New Washermanpet.
2	2	Royapuram ..	2/87, Suryanarayana Chetty Street, Royapuram.
3	3	Palmyrah Yard ..	Kalmandapam Road, Royapu- ram.
4	4	Sanjeevirayanpet	21/22, Kappal Polu Chetty Street, Old Washermanpet.
5	7	Royapuram Siddha	109, Adam Sahib Street, Roya- puram.

Veterinary Dispensaries:

1
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Sanitary Inspector's Office

<i>S. No.</i>	<i>Division No.</i>	<i>Location</i>
1	1 & 2 ...	81, Suryanarayana Chetty Street, Tondiarpet.
2	3 & 4 ..	Kalmandapam Road, Royapuram.
3	5 & 6 ..	151, Mannarswamy Koil Street, Royapuram.
4	7 & 8 ..	151, Mannarswamy Koil Street, Royapuram.
5	9 & 10 ..	151, Mannarswamy Koil Street, Royapuram.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Divns. Served</i>	<i>Location</i>
1	1, 2, 3, 7, 8 and 9 ..	2/87, Suryanarayana Chetty Street, Royapuram.
2	4, 5, 6 and 10 ..	546, Thiruvottiyur High Road, Washermanpet.

Burial and Burning Grounds

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of burial ground</i>	<i>Location</i>
1	2	Corporation Hindu, Muslim Xian, Chinese and Jainesh Burial and Burning Grounds.	Suryanarayana Chetty Street, Kasimodu.
2	2	Xiam Private Cemetery	.. Kasimodu Suryanarayana Chetty Street.
3	2	Muslim Private Burial Ground.	Thandavaraya Gramani Street.
4	5	St. Thomas Cemetery	West Cementry Road.
5	8	Parsee Burial Ground	West Mada Church Street, Royapuram.
6	9	St. Roques Cemetery	6, Monegar Choultry Road.
7	9	Christian Mission Society Burial Ground	Old Slaughter House Road.

Child Welfare Centres

<i>S. No.</i>	<i>Divin. No.</i>	<i>Name of Circle</i>	<i>Location</i>
1	1	New Washermanpet Centre	385, Thiruvottiyur High Road, Tondiarpet.
2	3	Grace Garden Centre and Creche	26, Suryanarayana Chetty Street, Royapuram.
3	4	Sanjeevirayanpet	Solaiappan Street, Washermanpet.
4	8	Royapuram	Near Corporation Model Lines, Palmyrahkuppam.

II CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	11	Seven Wells	1/50, St. Xavier Street.
2	14	Harbour	6/7, Adam Street.
3	15	Muthialpet	2, Geils Street, Muthialpet.
4	19	Mofuskhan Garden	55, Thatha Muthiappan Street.
5	20	Mannady	47, Linghi Chetty Street.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Divn. Nos.</i>	<i>Location</i>
1	11 & 12	84, Seven Wells Street, G.T. Madras.
2	13 & 14	42, Marakayar Labbai Street.
3	15 & 16	84, Seven Wells Street, G.T. Madras.
4	17 & 18	171, Govindappa Naicken Street.
5	19 & 20	47, Thatha Muthiappan Street.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Divn. Nos.</i>	<i>Location</i>
1	11, 12, 16 and 17.	27, Venkier Street, Kondithope.
2	13, 14, 15 and 20.	47, Linghi Chetty Street.
3	18 and 19	84, Seven Wells Road.

Burial and Burning Grounds

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1	14	Bora Muslim Burial Ground	1/46, Angappa Naicken Street.

Child Welfare Centre

<i>S. No.</i>	<i>Divn. Nos.</i>	<i>Name of Circle</i>	<i>Location</i>
1	12	Amman Koil North Creche	B.R. Garden Street, Madras-1.
2	13	Muthialpet Centre	47, Lingi Chetty Street, George Town.
3	16	Amman Koil South Centre	1/27, Appu Maistry Street, George Town.

III CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	21	Tondiarpet	Thiruvottiyur High Road.
2	23	Washermanpet	85, T.H. Road, Old Washermanpet.
3	25	Mint	244, Mint Street.
4	25	Basin Bridge	50, Basin Bridge Road.
5	28	Trevelyan Basin	17, Basin Bridge Road.

Veterinary Dispensaries

1	25	Basin Bridge	50, Basin Bridge Road, Kondithope.
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Sanitary Inspectors Offices

<i>S. No.</i>	<i>Divn. No.</i>	<i>Location</i>
1	21, 22 & 23	546, T.H. Road, Madras-21, Old Washermanpet.
2	24 & 25	27, Venkier Street, Kondithope.
3	26 & 27	183, Wall Tax Road.
5	30	1/96, Wall Tax Road.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Divns. Served</i>	<i>Location</i>
1	21, 22, 23, 24 and 25.	27, Venkier Street, Kondithope.
2	26, 27, 28, 29 and 30	17, Basin Water Works Street.

Corporation Cattle Yards

<i>S. No.</i>	<i>Divn. Nos.</i>	<i>Location</i>
1	25	Basin Bridge Road, Kondithope.

Burial and Burning Grounds

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1	20	Sait Mosque Burial Ground	556, Thiruvottiyur High Rd.
2	24	Washermanpet Hindu Burial Ground	Kathiavakkam High Road.

Child Welfare Centres

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1	23	Dr. V.R. Nagar Centre	86, T.H. Road, Washermanpet.
2	25	Kondithope Centre	53-A, Cochrane Basin Bridge Road.
3	26	Peddunaickenpet Centre	18, Zindah Sahib Street, Pedunaickenpet.
4	28	Treveleyan Basin Centre	52, Treveleyan Basin Street, Sowcarpet.
5	29	Elephant Gate Centre	Mallaya Market, Walltax Road.

IV CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	31	Perambur	55, Madhavaram High Road.
2	32	Vyasarpady	22, Gantz Road.
3	32	Sharma Nagar	Sharma Nagar Colony.
4	33	Pulianthope Unani	55, Pulianthope High Road.
5	34	Otteri	83, Stranhans Road, Otteri.
6	35	Otteri Siddha	1/B, Bashiam Reddy I Street.
7	39	Choolai Siddha	16, Alathur Subramanya Achari Street.
8	40	Balaiah Naidu	6, Rotlers Street.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Divn. No</i>	<i>Location</i>
1	31 & 32	40, Bharathy Road, Perambur.
2	33 & 38	55, Pulianthope High Road.
3	34 & 35	1-A, Bashiam Chetty Ist Street.
4	36 & 37	Kalathiappa Mudali Street, Choolai.
5	39 & 40	Kalathiappa Mudali Street, Choolai.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Divn. Served</i>	<i>Location</i>
1.	31	Bharathy Road, Perambur (Evenings).
2.	32	22, Gantz Road (Mornings).
3.	33, 34, 35 and 38	55, Pulianthope High Road, Madras-12.
4.	36, 37, 39 and 40	Rotler Street, Vepery.

Cattle Depots and Veterinary Dispensaries

<i>S. No.</i>	<i>Divn. No.</i>	<i>Location</i>
1.	33, 34 and 35	'G' Cattle Depot, Perambur High Road.

Burial and Burning Grounds

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1.	31	Malapathi Ponnappa Mudaliar Burial Ground	Malapathi Ponnappa Mudali Street.
2.	33	Mannali Hindu Burial Ground	Mannali Road, Vyasarpadi.
3.	32	Subedar Muslim Burial Ground	Gantz Road.
4.	38	Pulianthope Cremation Ground	Basin Bridge Road.
5.	38	Gujarathi and Maravari Buring Ground	Dr. Ansari Road.
6.	38	Vysia Burning Ground	Do.

Child Welfare Centres

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1.	31	Perambur Centre, F.P.	Bharathi Road, Perambur.
2.	33	Pulianthope	1/33, Gantz Road, Pulianthope.
3.	35	Thiru-Vi-Ka Nagar	54, Perambur High Road, Perambur.
4.	39	Choolai Centre and F.P.	15, Vijayavigneswarar Koil Street, Choolai.
5.	40	Hospital Maidan Centre	1, Manicka Chetty Street, Choolai.

V CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Divn. No.</i>	<i>Name of the Dispensary</i>	<i>Location</i>
1.	41	Sembiam	178, Paper Mills Road.
2.	45	Ayanavaram	127, Konnur High Road.
3.	46	Nammalwarpet	21-A, Subbaraya Chetty Street, 2nd Lane.
4.	48	Kosapet (Old)	1/7, Chellappa Mudali Street.
5.	48	Kosapet (New)	Sachidanandam Street, Kosapet.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Divn. Nos.</i>	<i>Location</i>
1.	41, 42 and 43	23, Paper Mills Road.
2.	43 & 45	127, Konnur High Road.
3.	44 & 46	1-B, Bashyam Reddy Ist Street.
4.	47 & 48	Smith Field Market, Choolai.
5.	49 & 50	Do.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Divns. Served</i>	<i>Location</i>
1.	41, 42 and 43	23, Paper Mills Road, Sembiam.
2.	44 and 45	127, Konnur High Road, Ayanavaram.
3.	46, 47, 48, 49 and 50	6, Gangadareswarar Koil Street.

Corporation Cattle Yards

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	47	73/74, Venkadathri Naicken Street.

Burial and Burning Grounds

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1	41	Hindu Burial Grounds	Madavaram High Road, Sembiam.
2	42	Do.	Do.
3	43	Battu Modoe Burial Ground	Agaram, near North Villivakkam Station.
4	47	Luther Christian Burial Ground	Brick Kilin Road.
5	50	Otteri Burial and Burning Ground	Brick Kilin Road.
6	50	Muslim Burial Ground	Thandavaraya Mudali Street.
7	50	Luthern Mission Cementry	Bricklin Street.

Child Welfare Centres

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1	41	Sembiam Centre	45, Paper Mills Road, Sembiam.
2	45	Ayanavaram Centre and Stores	United India Colony, Ayanavaram.
3	46	Nammalwarpet Centre	14, Subbroya Chetty Street, Nammalwarpet.
4	47	Otteri Centre	8, Chellappa Mudali Street, Otteri.
5	49	Perumal Centre and Creche	18, Kariappa Mudali Street, Perumalpet.
6	50	Purasawalkam Centre	109, Purasawalkam High Road, Purasawalkam.

VI CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of dispensaries</i>	<i>Location</i>
1	51	Aminjikarai	171, Poonamallee High Road
2	53	Chetput	241, McNichlos Road.
3	55	Nungambakkam	15, Noor Veeraswamy Iyer Street.
4	56	Thousand Lights	43, Model School Road.
5	59	Pudupakkam	369, Pycrofts Road.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	51 & 52	10, Shenoy Nagar Market.
2	53 & 54	15-B, Nungambakkam High Road.
3	57 & 58	369, Pycrofts Road, Amir Mahal.
4	55 & 56	21, Village Road, Nungambakkam.
5	59 & 60	369, Pycrofts Road, Amir Mahal.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Dns. Served</i>	<i>Location</i>
1	51 & 52	1, Round Market, Shenoy Nagar.
2	53 & 54	15, Nungambakkam High Road.
3	55 & 56	15, Nungambakkam High Road.
4	57, 58, 59 and 60	369, Pycrofts Road, Pudupakkam.

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1	51	Ayanavaram Burial Ground	Ayanavaram.
2	51	Kilpauk Old Cemetery	Kilpauk Garden Road.
3	51	Aminjikarai Burial Ground	Aminjikarai.
4	51	Kilpauk New Cemetery	Brevary Road.
5	51	Buddhist Burial Ground	Thandavarayan Street.
6	51	Kujji Naicken Hindu Burial	New Avadi Road (Velan- gadu).
7	51	Reddythope (Periakudal) Muslim Burial Ground	Shenoy Nagar (River side).
8	51	Arumbakkam Burial and Burning Ground	Arumbakkam N.S.K. Nagar (River Side).
9	51	Naduvankarai Burial and Burning Ground	Do.
10	54	Sterling Road Burial and Burning Ground	Sterling Road.
11	57	St. George Cathedral Burial Ground	Sterling Road.
12	59	Rama Rao Makhan Burial Ground.	16, Peters Road, Madras-14.

Child Welfare Centres

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1	52	Kilpauk Centre.	19, Halls Road, Kilpauk.
2	53	Chetput C.W.C., F.P. and Greche.	27, Jaganathapuram 2nd Street, Chetput.
3	55	Nungambakkam South Centre.	15, Noor Veeraswamy Iyer Street, Nungambakkam.
4	56	Thousand Light (West)	46, Aziz Mulk 3rd Street, Thousand Lights.
5	58	Pudupakkam Centre and F.P.	8, Nyniappa Maistry Street, Triplicane.
6	60	Durgapuram Centre.	84, Lloyds Road, Royapettah.

VII CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	61	Kilpauk	6, Gangathareeswarar Koil Street.
2	63	Ripon Buildings Staff Dispensary.	Ripon Buildings.
3	66	Chintadripet.	2/61, Arunachala Naicken Street.
4	67	Egmore.	34, Poosala Gengu Reddi Street.
5	69	Pudupet.	83, Haris Road.

Veterinary Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	68	Pudupet Dispensary.	Harris Road, Pudupet.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	61 & 62	65, Poonamallee High Road (Nehru Road).
2	63 & 64	23, Kolandai Street, Park Town
3	65 & 66	Vedagiri Maistry Street, Chindradripet.
4	67 & 68	34, Poosla Gengu Reddy Street.
5	69 & 70	Adikesavalu Street, Narasingapurami

Births and Deaths Registration Offices and Vaccination Depots.

<i>S. No.</i>	<i>Dns. Served</i>	<i>Location</i>
1	61 & 62	65, Poonamallee High Road.
2	63 & 64	23, Kolandai Street, Park Town.
3	65, 66 and 70	3/61, Arunachala Naicken Street, Chindadripet.
4	67, 68 and 69	34, Poosala Gengu Reddi Street, Egmore.

Corporation Cattle Yards

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	70	43, Singanna Chetty Street, Chindatripet.

Cattle Depots and Veterinary Depots

1	68 & 69	'D' Depot, 25, Haris Road.
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Child Welfare Centres

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of the Centre or Creche</i>	<i>Location</i>
1	64	Park Town Centre	2/3, Periera Street, Park Town.
2	66	Chintadripet	1/61, Arunachala Naicken Street, Chintadripet.
3	68	Pudupet	37, Langs Garden Road, Pudupet.
4	64	Ashok Vihar Centre	Ashok Vihar, behind Moore Market, P.T. Madras.

VIII CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	71	Thiruvatteeswaranpet	42, Thayar Sahib Street.
2	72	Chepauk	8, Khana Baugh Street.
3	75	Triplicane	25, Pycrofts Road.
4	77	Zambazaar	21, Gazette Begum Street.
5	80	Krishnampet	25, Dr. Natesan Road.

Veterinary Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	80	Barbers Bridge	Barbers Bridge Road, Krishnampet.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	71 & 72	1, Balamuthu Street, Madras-2.
2	72 & 74	25, Pycrofts Road, Triplicane.
3	75 & 76	22, Namasivaya Mudali Street, Triplicane.
4	77 & 78	25, Dr. Natesan Road, Krishnampet.
5	79 & 80	Do.

Births and Deaths Registration and Vaccination Depots

<i>S. No.</i>	<i>Dns. Served</i>	<i>Location</i>
1	71, 72 & 73	103, Thayar Sahib Street.
2	74, 75 & 76, 77	Dr. Beasant Road, near Ice House Pumping Station
3	78, 79 & 80	25, Barbers Bridge Road, Krishnampet.

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	74	Swarajapuram.

Cattle Depots and Veterinary Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	78	'E' Depot, Muthiah Mudali Street.

Burial and Burning Grounds

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Burial Grounds</i>	<i>Location</i>
1	71	St. Patric Burial Ground.	Body Guard Road.
2	71	Sacred Heart Burial Ground.	Do.
3	71	St. Andrews Burial Ground.	Do.
4	71	St. Armanian Street, Burial Ground.	Do.
5	71	St. Mary's Burial Ground.	Do.
6	79	Desthagir Sahib Durkah Burial Ground.	82, Dr. Natesan Road.
7	79	Syed Karimullah Sahib Burial Ground.	Do.
8	79	Pappu Masthan Durga Burial Ground.	Loyds Road.
9	79	Haji Ismail Maccan Burial Ground.	Do.
10	80	Krishnampet Burial and Burning Ground.	Gajapathy Lala Street.
11	80	Kudratha Alimakhan Burial Ground.	42, Dr. Natesan Road.
12	80	Neelam Badsha Durga Burial Ground.	Dr. Besant Road Behind Lady Willingdon College.

Child Welfare Centres

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1	76	Zambazaar	24/25, Surappa Mudali Street, Zambazaar.
2	77	Mirasahibpet	65, Dr. Besant Road, Tripli- cane.

IX CIRCLE**General Dispensaries**

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	81	Teynampet (North)	56-C, Muthiah Mudali Street, Madras-6.
2	84	Mylapore (North)	8, Karaneeswarar Pagoda Street.
3	85	Mylapore (South)	101, Kutchery Road.
4	88	Teynampet (South)	104, Mount Road, Teynam- pet.
5	89	Adyar	13, Greenways Road.

Veterinary Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	84	Prasanna Viyayagar Koil Dispensary.	Prasanna Vinayagar Koil Street, Mylapore.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	81 & 82	2/104, Mount Road, Teynampet.
2	83 & 84	65, Kutchery Road, Mylapore.
3	85 & 86	101, Kutchery Road, Mylapore.
4	87 & 88	2/104, Mount Road, Madras-2.
5	89 & 90	13, Greenways Road, Adyar.

Births and Deaths Registration Offices and Vaccination Depots

<i>S. No.</i>	<i>Dns. Served</i>	<i>Location</i>
1	81, 87 & 88	2/104, Mount Road, Teynampet.
2	82, 83 & 84	55, Royapettah High Road.
3	85 & 86	63, Kutchery Road, Mylapore.
4	89 & 90	13, Greenways Road, Adyar.

Cattle Depots and Veterinary Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	84	'F' Depot, Karaneeswarar Pagoda Street.

Burial and Burning Grounds

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1	84	Mylapore Hindu Burial and Burning Ground.	Karaneeswarar Pagoda Street.
2	86	Elapatha Mada Koil Cemetery	66, St. Mary's Road.
3	89	Quiebal Cemetery	Santhome High Road.
4	90	Urur Hindu Burial and Burning Ground.	Adyar.

Child Welfare Centre

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1	81	Teynampet Centre	104, Mount Road, Teynampet.
2	84	Karaneeswarapuram Centre	48, Batrezaar Road, Mylapore.
3	89	Raja Annamalaipuram Centre.	34, Brodies Road, Adyar.
4	90	Adyar Centre	44, Vasantha Press Road, Adyar.

X CIRCLE

General Dispensaries

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Dispensary</i>	<i>Location</i>
1	92	Kodambakkam	107, Arcot Road.
2	93	T. Nagar (North)	4, Dr. Sadasivam Road.
3	94	T. Nagar (South)	3, Sivagnanam Road.
4	97	Saidapet	51, Sadaiaappa Mudali Street.
5	99	Guindy	1-A, Sathani Street.

Sanitary Inspectors Offices

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Location</i>
1	91 & 92	114, Arcot Road, Kodambakkam.
2	93 & 94	3, Sivagnanam Road, T' Nagar.
3	95 & 96	3, Sivagnanam Road, T' Nagar.
4	97 & 98	16, Koothadum Pilliar Koil Street.
5	99 & 100	8, Little Mount Road, Guindy.

Births and Deaths Registration Offices and Vaccination

Depots

<i>S. No.</i>	<i>Dn. Served</i>	<i>Location</i>
1	91 & 92	107, Arcot Road, Vadapalani.
2	93, 94, 95 and 96	3, Sivagnanam Road, T' Nagar.
3	97, 98, 99 and 100	16, Koothadum Pilliar Koil Street.

Cattle Depots and Veterinary Dispensaries

<i>S. No.</i>	<i>Dn. No.</i>	<i>Location</i>
1	93	'H' Depot; Junction of Kodambakkam Road and Thirumalai Pillai Road.

Burial and Burning Grounds

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Burial Ground</i>	<i>Location</i>
1	92	Puliyur Burning and Burial Ground.	Puliyur.
2	92	Kodambakkam Burial and Burning Ground.	Arcot Road, Kodambakkam.
3	95	Kannammappet Burial and Burning Ground.	Kannammappet, T' Nagar.
4	97	Saidapet Burial and Burning Ground.	Jones Road.
5	99	Jain Adayar Burial and Burning ground.	Adayar.
6	99	Kottur Burial and Burning Ground.	Kottur.
7	99	Velachery Burial and Burning Ground.	Velacheri Road.
8	99	Mohammaden Burial Ground	Y.M.C.A., Mount Road.
9	99	Christian Burial Ground	Do.
10	99	Do.	Little Mount.
11	100	Muslim Burial Ground	32, Mosque Street.
12	100	Ikkattu Thangal Hindu Burial and Burning Ground.	Ikkattu Thangal, Saidapet.

Child Welfare Centres

<i>S. No.</i>	<i>Dn. Nos.</i>	<i>Name of Centre or Creche</i>	<i>Location</i>
1	92	Vadapalani Centre	68, Arcot Road, Kodambakkam.
2	93	Theagarayanagar Centre.	16, Raghaviah Road, T' Nagar.
3	94	Sathyamoorthy Nagar Centre.	3, Sivagnanam Road, T' Nagar.
4	97	Saidapet North Centre.	24, Dhanapal Chetty Street, Saidapet.
5	98	Saidapet Maternity Home and F.P.	6, Jeenis Road, Saidapet.
6	99	Guindy Centre.	6, Perumal Koil Street, Kottur.

ANNUAL HEALTH REPORT

1964

STATISTICAL SUPPLEMENT

Latitude —
Longitude —

Meteorological Data of Madras City Nungambakkam for 1964

Months	(1)	(2) Mean Barometric Pressure corrected for temperature and reduced to standard gravity and Mean sea level in Millibars 08.30 hours. I.S.T.	Temperature (C)				Humidity			Wind Mean direction of wind in Degrees from North at 08.30 hours. I.S.T.	Rainfall in Millimetres.		
			Mean maximum Co.	Mean minimum Co.	Mean daily range columns (3-4)	Mean Daily temperature $\frac{1}{2}$ of columns (3-4)	Mean dew point 08.30 hours. I.S.T.	Difference between mean point temperature and dew at 08.30 hours. I. S. T. Columns (6-7)	Percentage of Humidity at 08.30 hours. I.S.T.		Total fall for the month in Millimetres	Heaviest rainfall in 24 hrs. in Millimetres	No. of rainy days 2.5 m.m. or more and over
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
January	..	1016.1	28.9	19.3	9.6	24.1	19.6	4.5	80	N 31 W	0.0	0.0	0
February	..	1014.0	30.5	21.8	8.7	26.1	21.1	5.0	76	N 30 W	0.0	0.0	0
March	..	1013.1	32.8	23.7	9.1	28.3	23.3	5.0	76	S 57 W	0.0	0.0	0
April	..	1009.5	33.9	26.1	7.8	30.0	24.3	5.7	72	S 24 W	0.0	0.0	0
May	..	1005.8	39.1	28.5	10.6	33.8	22.7	11.1	58	S 52 W	1.6	1.6	0
June	..	1005.0	36.9	27.6	9.3	32.2	21.6	10.6	59	S 74 W	27.3	14.3	3
July	..	1006.0	34.3	26.0	8.3	30.1	22.7	7.4	71	S 60 W	104.6	31.2	6
August	..	1006.5	33.2	24.9	8.3	29.1	22.7	6.4	76	S 64 W	193.2	53.4	12
September	..	1007.7	32.1	24.7	7.5	28.4	22.9	5.5	77	S 81 W	130.9	33.6	9
October	..	1009.5	32.7	24.5	8.2	28.6	23.6	5.0	78	S 84 W	144.0	45.0	6
November	..	1011.4	28.7	21.9	6.8	25.3	22.3	3.0	86	N 34 W	735.0	142.8	16
December	..	1015.3	28.3	21.2	9.3	24.7	20.3	4.4	78	N 20 W	24.8	13.8	3
Total	..	12118.9	391.4	290.2	103.5	340.7	267.1	73.6	887	..	1361.4	335.7	55

STATISTIC SUPPLEMENT No. 2

Showing Births, Deaths and Infantile deaths Registered in each division during 1964

[illegible]

22	Kumaraswamy Nagar	..	0.1792	114.688	475	451	926	94.9	222	224	446	99.1	67	48	115	124.1	15
23	Dr. Vijaya Raghavalu Nagar	..	0.4331	277.184	596	514	1110	86.2	397	334	731	118.8	124	94	218	196.3	32
24	Basin Bridge	..	0.2410	154.240	317	287	604	90.5	164	151	315	108.6	55	38	93	153.9	17
25	Kondithope	..	0.1155	73.920	276	279	555	101.0	120	121	241	99.1	29	28	57	102.7	..
26	Peddunaickenpet	..	0.0983	62.912	356	291	647	81.7	153	127	280	120.4	38	25	63	94.2	..
27	Perumal Koil Garden	..	0.0524	33.536	326	295	621	90.4	125	117	242	106.7	31	29	60	96.6	..
28	Trevelyan Basin	..	0.0696	44.544	195	202	397	103.5	64	53	117	120.7	16	15	31	78.0	..
29	Elephant Gate	..	0.0604	38.656	217	183	400	84.3	75	51	126	147.0	18	15	33	82.5	..
30	Edapalayam	..	0.0799	51.136	226	235	461	103.9	85	73	158	116.4	30	19	49	106.2	..
31	Perambur	..	0.8650	553.600	421	380	801	90.2	188	185	373	101.6	51	50	101	126.0	15
32	Vyasarpadi	..	1.3200	844.800	476	501	977	105.2	274	314	588	87.2	80	98	178	183.4	22
33	Pulianthope	..	0.2880	184.320	636	625	1261	98.2	320	295	615	108.4	97	76	173	137.1	23
34	Wadia Nagar	..	0.4025	257.600	301	301	602	100.0	165	118	283	139.8	56	29	85	141.1	15
35	Thiru-Vi-Ka Nagar	..	0.5025	321.600	392	392	784	100.0	208	181	389	114.9	35	49	84	107.1	19
36	Pattalam	..	0.0845	54.080	185	186	371	100.5	86	83	169	103.6	17	16	33	88.9	6
37	Thattatt Kulam	..	0.0655	41.920	354	320	674	90.3	163	151	314	107.9	46	42	88	130.5	4
38	Dr. Besant Nagar	..	0.2965	189.760	547	461	1008	84.2	272	261	533	104.2	79	70	149	147.7	20
39	Choolai	..	0.0915	58.560	325	328	653	100.9	135	116	251	116.3	33	32	65	99.5	9
40	Hospital Garden	..	0.1321	84.544	381	321	702	84.2	113	126	239	89.6	37	29	66	94.0	10
41	Sembiam	..	0.8271	530.560	494	447	941	90.4	213	207	420	102.8	54	58	112	119.0	25
42	Seruvellore	..	0.3019	193.216	319	332	651	104.0	131	134	265	97.7	37	33	70	107.5	14
43	Agaram	..	2.6509	1696.756	261	243	504	93.1	116	115	231	100.8	31	33	64	126.9	10
44	Nagamma Ammai Nagar	..	0.3107	198.976	399	443	842	111.0	177	180	357	98.3	41	38	79	93.8	22
45	Ayanavaram	..	0.5300	339.200	590	563	1153	95.4	203	184	387	110.3	43	50	93	80.6	11
46	Nammalvarpet	..	0.6001	384.064	379	403	782	106.3	226	171	397	132.1	42	42	84	107.4	16
47	Otteri	..	0.1178	75.392	447	426	873	95.3	167	172	339	97.0	40	46	86	98.2	14
48	Kosapet	..	0.1237	79.168	417	419	836	100.4	158	143	301	110.4	46	40	86	102.8	15
49	Perumalpet	..	0.1272	81.408	294	269	563	91.4	95	103	198	92.2	19	22	41	72.8	15
50	Purasawalkam	..	0.1847	118.208	318	306	624	96.2	125	128	253	97.6	22	28	50	80.1	20
51	Shenoy Nagar	..	2.3891	1529.024	430	426	856	99.0	187	186	373	100.5	40	52	92	107.4	17

VITAL STATISTICS

STATISTICS SUPPLEMENT No. 2

Showing Births, Deaths and Infantile deaths Registered in each division during 1964

Division No.	Name of the Division	Area in square miles	Area in acres	Number of Live-Births Registered			Number of Males to every 100 Female Born	Number of Deaths Registered excluding Still-Births			Males to every 100 Female Deaths	Number of Infant Deaths Registered			Rates per 1,000 Live-Births Registered	Number of Still-Births Registered
				Male	Female	Total		Males	Females	Total		Males	Females	Total		
52	Kilpauk	0.6186	395.904	508	482	990	94.8	187	138	325	135.5	27	21	48	48.4	14
53	Chetpet	0.4513	288.832	334	313	647	93.7	144	160	304	90.0	34	34	68	105.1	5
54	Nungambakkam	0.6754	432.256	256	242	498	94.5	140	138	278	101.4	28	22	50	100.4	9
55	Sevagram	0.4210	269.440	323	302	625	93.4	144	131	275	109.9	43	27	70	231.7	6
56	Thousand Lights (West)	0.7479	478.656	329	303	632	92.0	123	119	242	103.3	25	30	55	87.0	9
57	Thousand Lights (East)	0.2501	160.064	175	172	347	98.2	103	97	200	106.1	30	23	53	152.7	10
58	Pudupakkam	0.0842	53.888	257	229	486	89.1	127	127	254	100.0	32	16	48	98.7	5
59	Amir Mahal	0.2061	131.904	302	272	574	90.0	175	129	304	135.6	38	24	62	108.0	3
60	Royapettah	0.1631	104.384	277	234	511	84.4	166	171	337	97.0	32	27	59	115.4	2
61	Gangadeeswarar Koil.	0.1771	113.344	262	231	493	88.1	109	94	203	115.9	29	11	40	81.1	8
62	Dr. Ambedkar Nagar.	0.3526	225.664	260	258	518	99.2	121	126	247	96.0	33	32	65	125.4	14
63	Periamet	0.3321	212.544	225	226	451	100.4	189	141	330	134.0	25	35	60	133.0	6
64	Park Town	0.4588	293.632	282	258	540	91.4	687	397	1084	173.5	39	49	88	162.9	7
65	Adikesavapuram	0.1859	118.976	306	293	599	95.7	115	143	258	80.4	21	27	48	80.1	6
66	Chintadripet	0.1524	97.536	316	298	614	94.3	135	128	263	105.4	53	64	117	190.5	9
67	Egmore	0.5670	362.880	1222	1206	2428	98.6	202	249	451	81.1	106	74	180	74.1	116
68	Pudupet	0.3751	240.064	517	543	1060	105.0	124	133	257	93.2	32	37	69	65.0	96

71	Nehru Nagar	0.6332	405.248	345	355	700	102.8	150	119	269	126.0	32	44	76	108.5	9
72	Thiruvateeswaranpet..	0.1685	107.840	321	292	613	90.9	133	136	269	97.7	36	45	81	132.1	11
73	Chepauk	0.2535	162.240	630	638	1268	101.2	109	118	227	92.3	50	28	78	61.5	52
74	Marina	0.1390	88.960	341	322	663	94.4	159	138	297	115.2	44	37	81	122.1	35
75	Triplicane	0.1573	100.672	243	249	492	102.4	102	84	186	121.4	26	15	41	83.3	18
76	Jam Bazaar	0.1286	82.304	347	311	658	89.6	155	142	297	109.1	48	35	83	126.1	13
77	Mirsaibpet	0.1253	80.192	393	395	788	100.5	160	170	330	94.1	43	38	81	102.7	23
78	Azad Nagar	0.2827	180.928	390	376	766	96.4	169	161	330	104.9	39	37	76	99.2	15
79	Durgapuram	0.3048	195.072	343	292	635	85.1	217	214	431	101.4	54	59	113	177.9	25
80	Krishnampet	0.1418	90.752	308	288	596	93.5	163	164	327	99.3	49	36	85	142.6	20
81	Teynampet	1.5236	335.104	304	284	588	93.4	108	105	213	102.8	24	23	47	79.9	17
82	Vivekanandapuram	0.3838	245.632	326	318	644	97.5	120	128	248	93.7	32	36	68	105.5	3
83	Madavaperumalpuram	0.1030	66.432	285	262	547	91.9	148	156	304	94.8	33	29	62	113.3	5
84	Karniswarapuram	0.2609	166.976	342	350	692	102.3	174	166	340	104.8	32	33	65	93.9	8
85	Santhome	0.2104	134.656	304	251	555	82.5	98	110	208	89.0	21	18	39	70.2	10
86	Mylapore	0.2195	140.480	260	251	511	96.5	130	105	235	123.8	27	33	60	117.4	12
87	Bheemannampet	0.7666	490.624	344	298	642	86.6	139	115	254	120.8	30	25	55	85.6	22
88	Alwarpet	0.6906	441.984	379	417	796	110.0	139	159	298	87.4	29	39	68	85.4	28
89	Raja Annamalaipuram	1.9966	1277.824	608	613	1221	100.8	245	244	489	100.4	66	64	130	106.4	28
90	Adayar	1.9616	1255.424	389	372	761	95.6	115	112	227	102.6	27	30	57	74.9	20
91	Aminjikarai	1.9516	1249.024	570	587	1157	102.9	267	283	550	94.3	71	87	158	136.5	21
92	Vadapalani	1.0866	695.424	557	589	1146	105.7	307	298	605	103.0	69	69	138	120.4	24
93	Theagaraya Nagar	0.6245	399.680	500	489	989	97.8	153	161	314	95.0	33	42	75	75.8	9
94	Sathiyamoorthi Nagar	0.7735	495.040	581	555	1136	95.5	210	195	405	107.6	57	60	117	102.9	23
95	Rajaji Nagar	0.4685	299.840	387	368	755	95.0	165	157	322	105.0	33	34	67	88.7	5
96	Kamraj Nagar	1.2526	806.664	582	576	1158	98.9	243	252	495	96.4	71	44	115	99.2	18
97	Saidapet (North)	0.6026	385.664	410	384	794	93.6	150	181	331	82.8	31	38	69	144.8	22
98	Periapet	0.4215	269.760	474	525	999	110.7	190	201	391	94.5	37	41	78	78.0	17
99	Guindy	5.3240	3407.360	472	431	903	91.3	192	198	390	96.9	45	46	91	100.7	26
100	Saidapet (South)	1.5186	471.904	370	373	743	100.8	157	154	311	101.9	37	37	74	99.5	15
Total ..		49.740	31823.594	37478	36088	73566	96.2	16542	15,456	31998	107.0	4,088	3,715	7,803	106.0	1534

VITAL STATISTICS

STATISTICS SUPPLEMENT No. 3

Births Registered in each Division during each month in 1964

Division No.	Name of the Division	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	New Washermanpet ..	16	19	60	134	197	108	130	92	80	122	59	287	1,304
2	Tondiarpet ..	8	4	34	88	121	90	103	65	38	120	114	135	920
3	Grace Garden ..	14	14	34	85	79	54	100	39	48	112	28	160	767
4	Sanjeevirayanpet ..	12	37	41	34	44	59	85	32	54	92	18	160	668
5	Mottai Garden ..	18	31	32	50	58	67	98	33	26	87	32	121	653
6	Narayanappa Naicken Garden ..	4	26	32	45	71	71	58	27	32	30	47	110	553
7	Singara Garden ..	17	6	21	66	88	33	40	36	48	33	28	83	499
8	Royapuram ..	13	15	33	78	55	69	50	30	27	44	32	125	571
9	Meenakshiammanpet ..	15	8	135	214	304	275	78	304	87	158	196	476	2,250
10	Old Washermanpet ..	7	40	34	27	61	64	60	34	18	40	46	128	559
11	Seven Wells (North) ..	6	5	49	57	71	44	87	30	41	51	53	99	593
12	Amman Koil (North).	9	6	33	46	70	35	55	38	28	44	40	103	507
13	Muthialpet ..	19	31	26	34	68	51	51	24	39	30	47	77	497
14	Harbour ..	30	24	25	42	66	50	70	41	37	50	61	104	600
15	Mannady ..	14	24	26	17	41	30	46	22	24	25	35	76	380
16	Amman Koil (South).	9	10	29	31	62	42	37	42	20	56	42	58	438
17	Seven Wells (South) ..	9	8	40	68	88	69	75	41	40	68	56	135	697
18	Sowcarpet ..	7	5	11	36	25	25	40	19	31	28	28	69	324
19	Kothavalchavadi ..	15	9	23	63	65	39	48	36	28	57	48	78	509
20	Katchaleeswarar Garden ..	16	18	15	26	39	30	33	15	20	30	57	57	356
21	Korukkupet ..	25	51	33	54	72	57	72	76	23	91	34	215	804
22	Kumarasamy Nagar ..	37	61	56	92	76	64	82	86	76	101	45	150	926
23	Dr. Vijayaragavalu Nagar ..	71	66	65	71	92	67	165	95	77	89	58	194	1,110

25	Kondithope	..	20	43	31	35	65	50	62	42	36	61	49	61	555
26	Peddu Naickenpet	..	17	39	46	31	68	41	76	34	25	60	50	160	647
27	Perumal Koil Garden	..	25	49	48	24	38	70	41	72	29	20	20	185	621
28	Tiruvelyan Basin	..	7	24	15	42	14	80	34	27	50	26	36	42	397
29	Elephant Gate	..	10	20	33	12	54	35	55	10	23	33	28	87	400
30	Edapalayam	..	14	13	46	24	15	53	46	9	45	71	8	117	461
31	Perambur	..	67	46	67	56	68	60	54	47	27	34	76	199	801
32	Vyasarpady	..	74	68	49	46	96	60	103	76	23	104	69	209	977
33	Puliyanthope	..	54	71	108	64	130	66	138	69	42	63	195	261	1,261
34	Wadia Nagar	..	27	37	25	40	51	41	63	45	32	53	77	111	602
35	Thiru Vi-Ka-Nagar	..	17	40	52	25	54	92	97	40	25	62	91	189	784
36	Pattalam	..	11	10	19	26	38	33	21	21	11	25	53	103	371
37	Thattan Kulam	..	22	16	73	29	77	47	52	42	12	34	117	153	674
38	Dr. Besant Nagar	..	26	80	48	50	125	79	59	72	27	82	137	223	1,008
39	Choolai	..	17	27	14	73	60	37	43	53	24	37	107	161	653
40	Hospital Garden	..	27	22	56	31	70	56	41	74	20	33	105	167	702
41	Sembiam	..	54	95	72	52	35	96	106	66	23	76	100	166	941
42	Seru Vellore	..	12	28	26	63	22	53	76	100	46	59	62	104	651
43	Agaram	..	12	13	28	46	22	50	53	45	46	28	40	121	504
44	Agamma Ammai Nagar	..	96	16	72	44	67	88	108	60	34	76	76	105	842
45	Ayanavaram	..	98	61	77	108	67	118	154	82	41	104	83	160	1,153
46	Nammalvarpet	..	138	34	42	39	49	50	82	52	81	44	51	120	782
47	Otteri	..	144	46	55	42	66	38	95	38	45	44	104	156	873
48	Kosapet	..	125	39	59	25	61	39	79	53	36	38	110	172	836
49	Perumalpet	..	106	38	21	36	34	20	69	17	27	7	86	102	563
50	Purasawalkam	..	112	27	41	33	46	28	51	41	15	24	93	113	624
51	Shenoy Nagar	..	18	43	88	90	57	81	88	54	18	102	71	146	856
52	Kilpauk	..	25	29	72	91	34	81	172	28	39	98	101	220	990
53	Chetpet	..	10	20	56	33	64	54	73	65	28	37	7	200	647
54	Nungambakkam	..	14	25	44	38	40	59	65	41	10	69	8	85	498
55	Sevegram	..	10	29	58	43	55	59	74	51	15	67	21	143	625
56	Thousand Lights (West)	..	16	46	51	64	33	64	96	65	19	50	11	117	632

VITAL STATISTICS

STATISTICS SUPPLEMENT No. 3—(contd.)

Birth Registered in each Division during each month in 1964—(contd.)

Division No.	Name of the Division	January	February	March	April	May	June	July	August	September	October	November	December	Total
57	Thousand Lights (East)	2	24	31	24	31	20	74	37	11	13	6	74	347
58	Pudupakkam	27	33	32	37	54	29	65	31	25	13	17	123	486
59	Amir Mahal	8	17	64	49	32	57	71	62	15	17	13	169	574
60	Royapettah	8	18	73	39	30	73	70	51	24	23	23	79	511
61	Gangadeeswarar Koil	9	37	24	24	42	58	44	31	19	24	63	118	493
62	Dr. Ambedkar Nagar.	5	23	19	39	52	24	64	41	21	33	58	139	518
63	Periamet	3	25	19	48	46	26	48	37	17	46	59	77	451
64	Park Town	7	36	27	40	61	42	38	36	26	41	62	124	540
65	Adikesavapuram	10	25	37	33	62	41	65	36	38	48	81	123	599
66	Chintadripet	10	40	45	34	53	42	46	74	38	51	64	117	614
67	Egmore	106	201	153	182	416	138	316	377	107	80	225	227	2,428
68	Pudupet	6	48	32	45	67	51	72	65	68	66	106	434	1,060
69	Komaleeswaranpet	8	33	25	49	67	45	52	46	32	10	65	85	517
70	Narasingapuram	9	28	34	40	40	28	61	39	18	42	65	88	492
71	Nehru Nagar	4	34	60	27	84	67	68	66	14	37	91	148	700
72	Tiruvateeswaranpet.	4	37	62	20	68	54	66	57	15	22	85	120	613
73	Chepauk	3	62	87	37	105	110	136	171	11	81	160	305	1,268
74	Marina	2	35	70	6	38	86	76	91	5	6	89	159	663
75	Triplicane	4	25	39	13	13	93	23	85	7	9	80	101	492
76	Zam Bazaar	11	40	49	21	16	122	49	83	12	19	83	153	658
77	Mirsahibpet	20	25	46	35	25	118	57	151	74	20	20	199	788
78	Azad Nagar	9	43	34	85	100	83	57	57	19	52	91	136	766
79	Durgapuram	7	38	59	54	49	62	81	49	41	30	99	66	635

82	Vivekanandapuram ..	5	20	45	54	23	91	80	22	46	50	103	105	644
83	Madava Perumal puram ..	11	40	53	50	32	85	60	42	27	46	50	51	547
84	Karniswarapuram ..	15	37	53	56	24	108	58	49	13	43	91	145	692
85	Santhome ..	5	15	47	40	23	59	78	26	12	43	97	110	555
86	Mylapore ..	15	14	29	58	32	42	60	29	8	58	67	99	511
87	Bheemannahpet ..	59	19	63	42	54	64	70	36	11	58	60	106	642
88	Alwarpet ..	79	28	61	47	77	48	56	55	35	56	70	184	796
89	Raja Annamalaipuram ..	24	59	92	107	47	104	205	70	51	116	50	296	1,221
90	Adyar ..	13	47	27	68	104	62	96	22	37	80	11	194	761
91	Aminjikarai ..	100	63	102	108	91	139	142	81	41	33	123	134	1,157
92	Vadapalani ..	82	90	125	120	75	65	191	116	63	33	99	87	1,146
93	Theagaroyanagar ..	14	31	72	57	72	48	76	41	54	67	57	400	989
94	Sathyamoorthi Nagar ..	10	31	68	49	76	70	106	49	63	65	58	491	1,136
95	Rajaji Nagar ..	17	31	61	52	80	58	105	37	72	57	76	109	755
96	Kamaraj Nagar ..	19	27	103	103	65	113	162	53	49	59	120	285	1,158
97	Saidapet (North) ..	37	45	53	56	87	60	98	43	56	42	82	135	794
98	Periapet ..	44	85	67	66	60	79	114	115	40	48	107	174	999
99	Guindy ..	27	52	68	52	91	78	68	77	45	73	118	154	903
100	Saidapet (South) ..	23	40	45	90	70	48	87	68	44	42	73	113	743
Total ..		2,650	3,492	4,979	5,261	6,572	6,393	7,907	5,783	3,475	5,294	6,908	14,852	73,566

Birth Registered among principle communities in each division during 1964

Division No.	Name of the Division	Aliens		Anglo-Indians		Indian Christians		Muslims		Hindus		Others		Total		Grand Total
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
1	New Washermanpet ..	..	..	2	42	32	42	49	54	553	572	..	..	636	668	1,304
2	Tondiarpet ..	..	..	1	50	42	50	16	14	395	402	..	..	454	466	920
3	Grace Garden ..	..	..	..	33	27	33	40	50	310	307	..	..	377	390	767
4	Sanjeevirayanpet ..	..	..	..	7	10	7	2	2	337	310	..	..	349	319	668
5	Mottai Garden ..	..	..	4	9	14	9	28	37	282	278	..	1	328	325	653
6	Narayanappa Naicken Garden ..	..	..	1	1	5	1	3	17	264	262	..	..	273	280	553
7	Singara Garden ..	..	..	..	5	10	5	3	5	234	242	..	..	247	252	499
8	Royapuram ..	..	..	2	26	37	26	15	22	215	251	..	..	269	302	571
9	Meenakshiammanpet ..	..	..	2	32	34	32	125	74	1,008	971	..	..	1,169	1,081	2,250
10	Old Washermanpet ..	..	..	1	15	18	15	15	19	259	231	..	..	293	266	559
11	Seven Wells (North) ..	..	..	4	13	4	13	11	12	283	266	..	..	302	291	593
12	Amman Koil (North).	..	..	..	7	15	7	21	27	248	187	..	..	284	223	507
13	Muthialpet ..	..	..	..	3	3	3	24	18	235	214	..	..	262	235	497
14	Harbour ..	..	..	..	1	5	1	123	120	197	154	..	..	325	275	600
15	Mannady ..	..	..	..	7	15	7	9	5	178	166	..	..	202	178	380
16	Amman Koil (South).	..	..	..	17	25	17	37	24	165	168	..	..	227	211	438
17	Seven Wells (South) ..	..	..	..	12	8	12	36	50	291	299	..	..	335	362	697
18	Sowcarpet ..	..	..	..	..	..	..	..	10	173	141	..	..	173	151	324
19	Kothavalchavadi ..	..	..	..	29	4	29	48	58	202	166	0	1	254	255	509
20	Katchaleeswarar Garden..	..	..	..	..	6	..	..	18	157	147	..	..	186	170	356
21	Korukkupet ..	..	..	..	3	2	3	23	3	400	394	..	..	404	400	804

Births Registered among principle communities in each Division during 1964—(contd.).

Division No.	Name of the Division	Aliens		Anglo-Indians		Indian Christians		Muslims		Hindus		Others		Total		Grand Total
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
55	Sevagram	..	..	..	13	10	..	..	3	310	289	..	..	323	302	625
56	Thousand Lights	..	2	2	34	25	35	37	238	257	238	..	..	329	303	632
57	Thousand Lights (East)	..	..	1	17	14	24	22	135	133	135	..	1	175	172	347
58	Pudupakkam	..	..	..	3	5	44	44	179	210	179	..	1	257	229	486
59	Amir Mahal	..	..	1	17	20	89	69	183	195	183	..	..	302	272	574
60	Royapettah	..	..	..	11	10	20	19	204	246	204	..	..	277	234	511
61	Gangadeeswarar Koil	..	..	2	9	12	8	5	211	241	211	4	1	262	231	493
62	Dr. Ambedkar Nagar.	..	..	4	38	33	34	29	191	183	191	3	1	260	258	518
63	Periamet	..	..	1	11	10	17	13	203	196	203	..	..	225	226	451
64	Park Town	..	..	1	14	13	13	15	230	254	230	..	..	282	258	540
65	Adikesavapuram	..	..	1	14	10	10	15	267	281	267	..	..	306	293	599
66	Chintadripet	..	..	..	13	2	19	15	281	284	281	..	..	316	298	614
67	Egmore	..	..	6	65	71	44	42	1,087	1,113	1,087	..	..	1,222	1,206	2,428
68	Pudupet	..	..	1	31	35	46	55	453	439	453	..	..	517	543	1,060
69	Komaleeswaranpet	..	..	2	11	9	17	14	220	244	220	..	..	274	243	517
70	Narasingapuram	..	..	..	8	7	12	14	229	221	229	..	..	241	251	492
71	Nehru Nagar	..	..	1	1	8	130	132	214	214	214	..	..	345	355	700
72	Tiruvateeswaranpet.	..	..	2	4	3	100	91	198	215	198	..	..	321	292	613
73	Chepauk	..	..	..	8	11	47	38	589	575	589	..	..	630	638	1,268
74	Marina	..	..	..	1	..	4	6	316	336	316	..	..	341	322	663

77	Mirsaibipet	..	..	..	..	9	5	180	173	204	217	..	..	12	13	37,470	36,096	73,566
78	Azad Nagar	..	..	..	..	6	5	45	53	339	317	..	..	..	..	..	..	..
79	Durgapuram	..	..	..	..	2	3	51	54	290	230	..	..	..	..	..	..	..
80	Krishnampet	..	..	..	..	6	9	29	39	273	240	..	..	..	..	..	..	..
81	Teynampet	..	2	..	2	5	6	7	10	290	266	..	..	..	..	..	..	..
82	Vivekanandapuram	..	..	..	..	20	9	3	6	303	303	..	..	..	..	..	..	..
83	Madava Perumal- puram	..	..	..	..	3	2	8	2	274	258	..	..	..	..	..	..	..
84	Karniswarapuram	..	..	..	..	15	7	30	23	297	320	..	..	..	..	..	..	..
85	Santhome	..	..	..	..	38	36	20	9	246	206	..	..	..	..	..	..	..
86	Mylapore	..	..	..	..	2	5	2	2	256	244	..	..	..	..	..	..	..
87	Bheemannapet	..	..	..	..	16	9	4	3	324	286	..	..	..	..	..	..	..
88	Alwarpet	..	..	..	..	19	16	7	6	352	393	..	..	..	..	..	..	..
89	Raja Annamalaipuram	..	1	..	..	33	17	8	5	567	590	..	..	..	..	..	..	..
90	Adyar	..	..	..	..	11	8	18	16	360	348	..	..	..	..	..	..	..
91	Aminjikarai	..	..	..	..	26	39	26	33	518	515	..	..	..	..	..	..	..
92	Vadapalani	..	..	..	..	31	38	32	25	494	526	..	..	..	..	..	..	..
93	Theagaroyanagar	..	..	..	..	5	5	2	2	493	482	..	..	..	..	..	..	..
94	Sathyamoorthi Nagar.	..	..	..	..	6	13	12	7	563	534	..	..	..	..	..	..	..
95	Rajaji Nagar	..	..	..	..	2	..	2	3	383	365	..	..	..	..	..	..	..
96	Kamaraj Nagar	..	..	..	..	9	8	6	6	567	562	..	..	..	..	..	..	..
97	Saidapet (North)	..	..	..	..	4	2	5	9	401	373	..	..	..	..	..	..	..
98	Periapet	..	..	..	..	8	12	27	34	438	475	..	..	..	1	..	..	..
99	Guindy	..	..	..	..	34	43	12	21	425	367	..	..	..	..	..	..	..
100	Saidapet (South)	..	..	..	..	4	7	11	11	353	354	..	2	..	1	..	..	..
Total		..	3	5	74	63	1,453	1,453	2,994	2,920	32,934	31,642	12	13	37,470	36,096	73,566	..

Death Registered in each Division during each month in 1964

Division No.	Name of the Division	January	February	March	April	May	June	July	August	September	October	November	December	Total deaths registered excluding still births
1	New Washermanpet ..	32	44	68	36	43	42	61	57	125	93	102	136	839
2	Tondiarpet ..	60	26	29	26	26	21	43	38	31	46	45	59	450
3	Grace Garden ..	20	9	18	19	18	12	16	19	23	34	37	30	255
4	Sanjeevirayanpet ..	8	32	14	11	17	16	26	10	21	24	18	32	229
5	Mottai Garden ..	22	19	22	12	18	18	21	22	24	26	32	34	270
6	Narayanappa Naicken Garden ..	11	13	14	11	13	13	14	13	33	28	24	17	204
7	Singara Garden ..	12	12	12	14	13	16	15	20	27	28	36	26	231
8	Royapuram ..	19	17	19	12	20	14	18	14	7	25	38	17	220
9	Meenakshiammanpet.	31	20	24	35	30	24	23	33	31	55	39	40	385
10	Old Washermanpet ..	16	22	24	17	23	15	25	21	56	27	28	54	328
11	Seven Wells (North) ..	16	16	26	57	93	54	63	27	15	65	51	98	581
12	Amman Koil (North).	6	13	8	13	21	16	10	14	25	23	15	32	196
13	Muthialpet ..	25	14	7	15	22	13	12	17	33	17	19	26	220
14	Harbour ..	21	15	13	8	16	18	18	23	13	34	24	38	241
15	Mannady ..	15	13	10	9	7	9	7	9	12	14	6	12	123
16	Amman Koil (South)	22	6	7	7	11	12	9	11	21	6	21	19	152
17	Seven Wells (South) ..	15	19	7	11	23	18	15	23	6	24	18	38	217
18	Sowcarpet ..	9	6	6	6	16	27	11	9	20	5	15	21	151
19	Kothavalchavadi ..	7	10	12	6	22	14	15	10	7	15	5	25	148
20	Katchaleeswarar Garden ..	9	9	5	12	10	13	13	7	45	8	14	13	158
21	Korukkupet ..	56	25	25	20	35	23	29	48	54	35	64	97	511
22	Kumarasamy Nagar ..	33	30	21	20	35	23	33	32	61	47	50	61	446
23	Dr. Vijayaragavalu													

25	Kondithope	..	23	13	11	15	23	13	15	17	22	26	41	241
26	Peddu Naickenpet	..	18	21	15	14	6	5	25	34	26	41	50	280
27	Perumal Koil Garden.	..	11	22	14	17	17	11	20	31	22	19	35	242
28	Tiruvvelyan Basin	..	3	9	4	4	9	17	11	10	7	17	23	117
29	Elephant Gate	..	4	4	3	3	12	4	7	29	14	19	12	126
30	Edapalayam	..	8	18	10	9	8	8	6	18	13	18	29	158
31	Perambur	..	31	15	18	29	32	24	24	26	31	30	69	373
32	Vyasarpady	..	37	52	33	29	43	23	36	53	72	61	90	588
33	Puliyanthope	..	46	51	32	40	33	37	48	39	65	76	76	615
34	Wadia Nagar	..	13	19	16	12	16	18	23	34	32	34	30	283
35	Thiru Vi-Ka-Nagar	..	35	37	19	22	30	27	34	28	36	31	57	389
36	Pattalam	..	13	15	15	15	8	10	13	12	19	13	15	169
37	Thattan Kulam	..	22	20	19	21	21	22	28	21	23	38	43	314
38	Dr. Besant Nagar	..	47	42	34	22	42	32	31	35	57	76	69	533
39	Choolai	..	25	23	10	27	18	14	10	13	24	35	27	251
40	Hospital Garden	..	9	25	30	24	24	12	15	7	20	25	19	239
41	Sembiam	..	31	37	31	22	19	26	42	17	24	46	79	420
42	Seru Vellore	..	16	30	11	7	11	18	30	17	27	30	45	265
43	Agaram	..	33	13	11	3	46	14	13	14	14	17	36	231
44	Agamma Ammai	..	34	9	31	18	26	23	39	22	36	45	36	357
45	Ayanavaram	..	26	29	19	34	23	28	35	32	39	57	29	387
46	Nammalvarpet	..	23	42	20	16	26	29	37	30	35	45	71	397
47	Otteri	..	13	30	25	23	16	23	25	28	49	28	41	339
48	Kosapet	..	7	34	22	16	12	22	30	15	39	35	31	301
49	Perumalpet	..	15	14	6	13	19	10	24	31	8	15	22	198
50	Purasawalkam	..	34	13	21	11	25	15	13	28	20	18	38	253
51	Shenoy Nagar	..	17	33	27	28	33	24	26	26	29	27	51	373
52	Kilpauk	..	14	31	34	12	19	30	26	17	29	17	53	325
53	Chetpet	..	11	28	14	17	22	15	37	35	22	28	29	304
54	Nungambakkam	..	24	16	13	19	19	17	26	15	29	34	41	278
55	Sevagram	..	18	19	18	17	20	17	21	35	31	32	25	275

Deaths Registered in each Division during each month in 1964—(contd.)

Division No.	Name of the Division	January	February	March	April	May	June	July	August	September	October	November	December	Total deaths registered excluding still births
56	Thousand Lights (West)	16	16	19	9	13	20	23	24	17	24	36	25	242
57	Thousand Lights (East)	25	18	11	17	11	9	16	14	21	17	19	22	200
58	Pudupakkam	16	26	16	16	32	18	21	16	23	18	29	23	254
59	Amir Mahal	8	24	16	21	15	9	36	15	35	27	31	67	304
60	Royapettah	14	16	23	13	11	104	22	24	25	27	18	40	337
61	Gangadeeswarar Koil.	20	17	10	11	19	16	11	38	14	19	13	15	203
62	Dr. Ambedkar Nagar.	15	23	29	13	7	15	30	16	28	18	24	29	247
63	Periamet	59	13	17	12	87	35	19	15	18	18	21	16	330
64	Park Town	27	109	93	81	20	45	138	84	111	93	114	169	1,084
65	Adikesavapuram	15	18	10	19	14	22	26	15	34	28	27	30	258
66	Chintadripet	28	20	16	14	39	11	16	14	28	30	20	27	263
67	Egmore	15	31	28	39	19	18	47	64	112	12	46	20	451
68	Pudupet	13	15	21	21	10	25	21	29	23	11	26	42	257
69	Komaleeswaranpet	19	12	15	15	14	14	7	21	25	12	15	71	240
70	Narasingapuram	18	28	11	10	19	9	10	16	15	23	20	34	213
71	Nehru Nagar	18	12	22	13	22	12	33	20	26	24	47	20	269
72	Tiruvateeswaranpet	10	15	22	16	26	10	24	25	27	28	29	37	269
73	Chepauk	5	7	22	9	12	11	27	29	11	19	35	40	227
74	Marina	29	16	21	14	12	23	13	29	24	28	46	42	297
75	Triplicane	6	10	17	11	22	8	13	12	20	12	26	29	186
76	Zam Bazaar	22	18	15	16	23	21	18	34	24	28	28	50	297
77	Mirsahibpet	27	19	25	19	33	22	27	33	33	22	32	38	330
78	Azad Nagar	27	24	12	36	28	33	22	28	31	28	34	27	330

80	Krishnampet	..	17	24	27	18	24	29	24	21	33	26	41	43	327
81	Teynampet	..	18	20	16	20	14	10	15	21	23	20	11	25	213
82	Vivekanandapuram	..	20	17	27	19	16	30	16	24	10	15	25	29	248
83	Madava Perumal- puram	..	21	17	27	23	35	23	29	28	23	13	32	33	304
84	Karniswarapuram	..	19	20	33	24	16	22	31	40	30	22	41	42	340
85	Santhome	..	13	15	21	20	10	20	21	14	20	16	17	21	208
86	Mylapore	..	15	15	14	31	18	17	23	15	21	15	16	35	235
87	Bheemannapet	..	22	23	24	23	17	19	24	11	23	20	19	29	254
88	Alwarpet	..	22	21	23	22	28	20	30	16	25	25	28	38	298
89	Raja Annamalaipuram	..	29	53	27	46	14	37	33	56	45	38	39	72	489
90	Adyar	..	6	16	12	21	28	18	17	17	27	22	25	18	227
91	Aminjikarai	..	52	44	38	41	31	18	37	54	46	39	45	105	550
92	Vadapalani	..	40	60	53	38	24	32	24	41	68	60	53	112	605
93	Theagarayanagar	..	27	23	21	23	37	20	29	25	38	28	21	22	314
94	Sathyamoorthi Nagar.	..	25	19	35	29	27	33	32	38	35	48	44	40	405
95	Rajaji Nagar	..	27	14	23	26	31	25	22	18	56	24	28	28	322
96	Kamaraj Nagar	..	35	42	38	40	20	14	46	40	35	43	62	80	495
97	Saidapet (North)	..	32	16	23	18	20	25	26	27	39	32	41	32	331
98	Periapet	..	27	32	25	15	27	42	29	31	43	42	44	34	391
99	Guindy	..	29	30	23	25	21	37	25	33	41	33	35	58	390
100	Saidapet (South)	..	31	27	22	27	..	24	26	21	29	34	27	43	311
Total ..			2,226	2,307	2,144	2,023	2,270	2,122	2,537	2,579	3,273	2,905	3,313	4,299	31,998

Death Registered among Principal communities in each Division during the year 1964.

Division No.	Name of the Division	Aliens		Anglo-Indians		Indian Christians		Muslims		Hindus		Others		All communities		Total Deaths Registered (excluding still Births)
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
1	New Washermanpet ..	..	..	..	..	23	21	26	39	362	368	..	..	411	428	839
2	Tondiarpet ..	..	..	3	..	35	32	22	11	161	186	..	..	221	229	450
3	Grace Garden ..	..	..	1	1	11	4	21	18	110	87	2	..	145	110	255
4	Sanjeevirayanpet ..	..	..	..	..	2	3	1	3	107	113	..	..	110	119	229
5	Mottai Garden ..	..	..	..	..	3	3	17	20	122	105	..	..	142	128	270
6	Narayanappa Naicken Garden ..	..	..	..	..	..	..	..	..	107	97	..	..	107	97	204
7	Singara Garden ..	..	..	1	..	4	6	4	3	105	108	..	..	114	117	231
8	Royapuram ..	..	..	1	1	14	16	12	13	78	85	..	..	105	115	220
9	Meenakshiammanpet. ..	..	..	..	..	6	11	29	30	154	155	..	..	189	196	385
10	Old Washermanpet ..	..	..	3	1	27	17	11	7	147	115	..	..	188	140	328
11	Seven Wells (North)..	..	..	1	2	13	10	17	15	332	191	..	..	363	218	581
12	Amman Koil (North).	..	..	..	..	7	8	15	13	72	81	..	..	94	102	196
13	Muthialpet ..	..	..	..	..	2	4	18	18	85	93	..	..	105	115	220
14	Harbour ..	..	..	..	..	3	3	60	35	74	65	1	..	138	103	241
15	Mannady ..	..	..	..	..	6	6	4	3	52	52	..	..	62	61	123
16	Amman Koil (South).	..	..	..	1	8	11	14	8	61	49	..	..	83	69	152
17	Seven Wells (South) ..	..	..	..	1	11	4	9	12	101	79	..	..	121	96	217
18	Sowcarpet ..	..	..	..	..	2	3	8	4	84	50	..	..	94	57	151
19	Kothavalchavadi ..	..	..	..	..	..	..	19	22	65	41	1	..	85	63	148
20	Katchaleeswarar Garden ..	..	..	..	1	5	7	11	3	67	61	2	1	85	73	158
21	Korukkupet ..	..	..	..	..	2	..	4	..	249	245	5	6	260	251	511

No.	Name of the place	Area in acres	Population	Number of houses	Number of families	Number of persons	Number of persons per acre	Number of persons per family	Number of persons per house
24	Basin Bridge	16	19	19	19	19	1.19	1.19	1.19
25	Kondithope	1	9	9	9	9	9.00	9.00	9.00
26	Peddu Naickenpet	3	..	..	..	..	..	..	..
27	Perumal Koil Garden.	..	..	..	..	..	..	..	..
28	Tiruvvelyan Basin	..	..	..	..	..	..	..	..
29	Elephant Gate	..	..	..	..	..	..	..	..
30	Edapalayam	..	..	..	..	..	..	..	..
31	Perambur	2	2	2	2	2	1.00	1.00	1.00
32	Vyasarpaady	15	10	10	10	10	0.67	0.67	0.67
33	Puliyanthope	6	75	75	75	75	12.50	12.50	12.50
34	Wadia Nagar	7	65	65	65	65	9.29	9.29	9.29
35	Thiru Vi-Ka-Nagar	21	14	14	14	14	0.67	0.67	0.67
36	Pattalam	6	1	1	1	1	0.17	0.17	0.17
37	Thattan Kulam	3	1	1	1	1	0.33	0.33	0.33
38	Dr. Besant Nagar	12	73	73	73	73	6.08	6.08	6.08
39	Choolai	1	1	1	1	1	1.00	1.00	1.00
40	Hospital Garden	6	3	3	3	3	0.50	0.50	0.50
41	Sembiam	14	18	18	18	18	1.29	1.29	1.29
42	Seru Vellore	7	15	15	15	15	2.14	2.14	2.14
43	Agaram	7	4	4	4	4	0.57	0.57	0.57
44	Agamma Ammai	11	11	11	11	11	1.00	1.00	1.00
45	Nagar	10	12	12	12	12	1.20	1.20	1.20
46	Ayanavaram	17	8	8	8	8	0.47	0.47	0.47
47	Nammalvarpet	9	6	6	6	6	0.67	0.67	0.67
48	Otteri	10	2	2	2	2	0.20	0.20	0.20
49	Kosapet	13	4	4	4	4	0.31	0.31	0.31
50	Perumalpet	12	4	4	4	4	0.33	0.33	0.33
51	Purasawalkam	6	5	5	5	5	0.83	0.83	0.83
52	Shenoy Nagar	16	11	11	11	11	0.69	0.69	0.69
53	Kilpauk	17	7	7	7	7	0.41	0.41	0.41
54	Chetpet	14	3	3	3	3	0.21	0.21	0.21

Deaths registered among Principal communities in each Division during the year 1964.

Division No.	Name of the Division	Aliens		Anglo-Indians		Indian Christians		Muslims		Hindus		Others		All communities		Total Deaths Registered (excluding still Births)
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
54	Nungambakkam	..	..	9	4	8	17	2	1	120	116	1	..	140	138	278
55	Sevagram	..	..	..	..	8	7	11	14	125	110	..	..	144	131	275
56	Thousand Lights (West)	..	..	2	..	13	12	13	12	93	94	..	..	123	119	242
57	Thousand Lights (East)	..	..	..	2	16	16	17	20	70	59	..	..	103	97	200
58	Pudupakkam	..	..	1	..	6	4	31	35	89	88	..	..	127	127	254
59	Amir Mahal	..	..	..	1	13	12	29	18	133	98	..	..	175	129	304
60	Royapettah	..	..	1	..	6	5	4	7	155	159	..	..	166	171	337
61	Gangadeeswarar Koil.	..	..	2	1	14	10	20	15	72	68	1	..	109	94	203
62	Dr. Ambedkar Nagar.	..	..	1	2	12	13	15	12	93	99	..	..	121	126	247
63	Periamet	..	..	4	..	12	7	19	13	149	121	5	..	189	141	330
64	Park Town	..	..	..	..	15	8	21	13	646	373	5	3	687	397	1,084
65	Adikesavapuram	..	..	..	2	3	4	9	11	103	126	..	..	115	143	258
66	Chintadripet	..	..	1	..	7	9	20	12	107	107	..	..	135	128	263
67	Egmore	..	..	1	..	6	14	22	25	173	210	..	..	202	249	451
68	Pudupet	..	..	..	2	9	2	11	6	104	123	..	..	124	133	257
69	Komaleeswaranpet	..	..	..	..	5	6	14	12	94	109	..	..	113	127	240
70	Narasingapuram	..	..	..	..	4	6	39	34	79	51	..	..	122	91	213
71	Nehru Nagar	..	..	..	..	1	2	50	52	99	65	..	..	150	119	269
72	Tiruvatteeswaranpet.	..	..	..	1	1	3	41	48	91	84	..	..	133	136	269
73	Chepauk	..	..	..	..	1	2	9	9	99	107	..	..	109	118	227
74	Marina	..	..	..	..	3	..	4	10	152	128	..	..	159	138	297

[illegible]

Deaths Registered according to Age and Sex in each Division during the year 1964.

Division No.	Name of the Division	Under 1 year		1 to 5 years		5 to 10 years		10 to 15 years		15 to 20 years		20 to 30 years		30 to 40 years		40 to 50 years		50 to 60 years		60 and above		Total		Grand Total
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females			
1	New Washermanpet ..	118	83	108	102	17	23	8	8	4	6	26	27	22	24	35	21	24	12	49	122	411	428	839
2	Tondiarpet ..	40	56	57	72	15	12	4	2	3	5	11	7	8	11	10	10	16	11	57	43	221	229	450
3	Grace Garden ..	41	29	33	23	10	10	2	..	4	2	6	8	9	6	7	6	8	4	25	22	145	110	255
4	Sanjeevirayanpet ..	39	26	17	22	6	2	1	2	3	3	2	9	3	6	14	7	10	9	15	33	110	119	229
5	Mottai Garden ..	52	36	27	37	3	4	1	1	4	4	3	10	2	7	7	5	14	11	29	13	142	128	270
6	Narayanappa Naicken Garden ..	39	26	11	21	2	4	5	2	5	3	4	9	1	3	8	5	14	2	18	22	107	97	204
7	Singara Garden ..	42	36	27	30	5	3	3	7	1	2	1	10	6	7	2	2	11	4	16	16	114	117	231
8	Royapuram ..	26	28	20	27	2	7	2	2	1	1	1	2	7	9	6	9	11	6	29	24	105	115	220
9	Meenakshiammanpet. ..	54	53	47	35	4	4	1	3	2	1	3	16	9	5	8	11	32	15	39	53	189	196	385
10	Old Washermanpet ..	56	32	45	36	5	6	5	3	1	3	7	9	9	5	8	5	14	7	38	34	188	140	328
11	Seven Wells (North) ..	30	20	47	35	12	16	1	2	7	5	31	61	63	24	65	16	64	23	43	16	363	218	581
12	Amman Koil (North).	27	29	14	21	5	8	1	3	2	2	2	4	2	5	5	6	10	3	26	21	94	102	196
13	Muthialpet ..	29	24	18	12	1	5	7	5	1	1	1	4	4	3	4	8	12	5	28	48	105	115	220
14	Harbour ..	41	31	29	31	2	3	2	2	3	3	5	3	6	6	15	5	15	3	20	16	138	103	241
15	Mannady ..	13	15	8	19	6	1	1	1	1	1	3	6	3	5	6	2	7	8	14	3	62	61	123
16	Amman Koil (South).	17	16	10	4	5	3	6	4	1	2	3	3	2	4	10	4	9	2	20	27	83	69	152
17	Seven Wells (South) ..	27	26	16	3	9	2	3	4	1	2	12	5	4	5	10	3	18	6	21	40	121	96	217
18	Sowcarpet ..	6	14	5	12	3	5	1	1	5	2	13	1	6	4	6	1	11	7	38	10	94	57	151
19	Kothavalchavadi ..	16	14	14	16	1	4	1	1	3	1	6	5	4	7	8	2	10	6	22	7	85	63	148
20	Katchaleeswarar Garden ..	22	13	11	6	3	3	2	2	1	1	1	5	6	6	8	2	9	9	22	26	85	73	158
21	Korukkupet ..	84	68	45	82	6	12	5	4	3	2	7	7	6	7	20	10	9	11	75	48	260	251	511
22	Kumarasamy Nagar..	67	48	42	62	9	16	3	5	2	1	11	8	8	10	20	10	17	16	43	48	222	224	444
23	Dr. Vijayaragavalu Nagar ..	124	94	100	114	9	11	5	4	4	2	22	29	15	6	24	11	27	10	67	53	397	334	731

[illegible]

Deaths Registered according to Age and Sex in each Division during the year 1964—(contd.)

Division No.	Name of the Division	Under 1 year		1 to 5 years		5 to 10 years		10 to 15 years		15 to 20 years		20 to 30 years		30 to 40 years		40 to 50 years		50 to 60 years		60 and above		Total		Grand Total
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
61	Gangadeeswarar Koil	29	11	5	19	4	4	2	1	2	2	4	3	4	2	7	3	13	8	39	41	109	94	203
62	Dr. Ambedkar Nagar	33	32	10	24	4	6	2	1	4	4	16	8	8	6	8	6	28	14	11	24	121	126	247
63	Periamet	25	35	23	26	9	3	8	2	2	2	9	16	32	15	33	12	27	16	21	13	189	141	330
64	Park Town	39	49	56	74	28	18	13	9	7	7	42	35	74	20	79	20	95	33	252	137	687	397	1,084
65	Adikesavapuram	21	27	11	32	13	11	1	2	5	4	10	5	4	23	7	16	12	12	31	10	115	143	258
66	Chintadripet	53	64	21	13	4	1	2	2	5	4	17	9	3	11	8	7	9	6	14	8	136	128	264
67	Egmore	106	74	43	37	5	4	3	6	1	1	6	17	6	16	8	11	14	13	5	70	202	249	451
68	Pudupet	32	37	25	21	7	11	2	2	7	7	6	7	5	3	8	8	13	8	24	36	124	133	257
69	Komaleeswaranpet	35	17	25	24	6	4	2	2	2	2	5	4	4	2	6	4	9	9	19	59	113	127	240
70	Narasingapuram	27	24	19	18	6	8	1	2	2	6	5	9	5	3	5	9	10	4	42	8	122	91	213
71	Nehru Nagar	32	44	37	25	3	1	1	1	3	1	9	9	4	5	6	4	13	15	50	14	150	119	269
72	Tiruvatteeswaranpet	36	45	17	25	6	4	2	4	3	3	4	7	5	4	12	7	14	13	33	24	133	136	269
73	Chepauk	50	28	7	5	7	2	2	5	1	5	16	11	5	7	7	6	7	6	7	43	109	118	227
74	Marina	44	37	33	41	10	5	1	1	3	3	5	10	9	12	8	8	15	9	31	12	159	138	297
75	Triplicane	26	15	12	13	2	4	1	1	2	5	6	7	5	7	7	2	11	7	30	23	102	84	186
76	Zam Bazaar	48	35	29	33	6	12	3	6	2	2	2	7	3	9	7	7	14	7	37	24	155	142	297
77	Mirsahibpet	43	38	29	34	9	4	5	3	3	3	5	7	9	6	8	9	13	7	36	59	160	170	330
78	Azad Nagar	39	37	44	35	11	10	3	1	5	6	3	6	1	4	7	5	9	10	51	48	169	161	330
79	Durgapuram	54	54	48	66	12	21	3	1	4	4	8	4	5	7	10	5	14	15	62	30	217	214	431
80	Krishnampet	49	36	47	47	8	12	3	5	2	2	10	2	9	1	7	3	12	9	13	48	163	164	327
81	Teynampet	24	23	26	23	8	2	2	1	2	2	3	3	7	6	9	8	12	11	16	25	108	105	213
82	Vivekanandapuram	32	36	30	32	15	4	3	1	2	2	4	8	5	6	6	4	15	5	8	30	120	128	248
83	Madava Perumal-puram	33	29	42	46	11	6	3	2	2	2	3	3	6	6	3	5	8	7	37	50	148	156	304
84	Karniswarapuram	32	33	49	44	11	14	1	2	5	5	8	9	7	8	5	3	7	6	52	38	174	166	340

87	Biteemannapet	..	30	23	3	4	6	1	3	4	6	12	6	4	1	4	8	19	10	30	27	139	115	254	
88	Alwarpet	..	29	39	10	14	4	3	2	2	4	5	3	2	8	9	3	12	9	38	34	139	159	298	
89	Raja Annamalaipuram	..	66	64	69	12	3	3	2	1	6	4	2	2	4	6	8	14	13	86	66	245	244	489	
90	Adayar	..	27	30	19	5	4	6	2	5	7	6	5	2	13	11	10	20	8	10	10	115	112	227	
91	Aminjikarai	..	71	87	62	10	6	6	3	5	13	13	14	3	12	10	14	20	20	36	54	267	283	550	
92	Vadapalani	..	69	69	67	17	5	3	5	3	5	21	20	3	15	19	11	24	21	98	71	307	298	605	
93	Theagarayanagar	..	33	42	37	8	2	2	1	4	9	9	4	1	13	7	8	13	8	29	30	153	161	314	
94	Sathyamoorthi Nagar	..	57	60	42	11	6	2	4	4	6	4	6	4	5	9	5	8	11	53	53	210	195	405	
95	Rajaji Nagar	..	33	34	26	15	4	3	4	3	5	7	5	4	16	12	5	14	8	24	40	165	157	322	
96	Kamaraj Nagar	..	71	44	50	10	4	7	2	1	7	12	7	2	8	12	12	18	9	72	99	243	252	495	
97	Saidapet (North)	..	31	38	44	11	4	6	2	1	7	8	6	2	14	9	7	14	4	28	48	150	181	331	
98	Periapet	..	37	41	43	12	1	4	5	2	4	10	4	5	9	8	10	14	5	55	67	190	201	391	
99	Guindy	..	45	46	48	9	4	6	3	3	7	9	10	4	4	12	10	17	18	39	45	192	198	390	
100	Saidapet (South)	..	37	37	36	12	4	1	3	2	12	7	9	3	7	10	11	16	8	19	37	157	154	311	
			4,088	3,715	3,280	3,568	769	740	297	264	264	283	770	833	821	781	1154	710	1,505	936	3,594	3,625	16,542	15,456	31,998

Deaths from Principal Causes Registered in the division during the year 1964—

Division No.	Name of the Division	Plague	Cholera	Small-pox	Measles	Enteric Fever	Kala-Azar	Malaria	Influenza	Other Fevers	Dysentery	Diarrhoea	Tuberculosis including T.B. of Lungs.	General Respiratory Diseases	Injuries	Maternal Deaths	Neoplasms	All other causes	Total deaths Registered (excluding still-births)
1	New Washermenpet ..	..	43	88	..	2	..	..	..	20	40	20	19	208	1	..	2	396	839
2	Tondiarpet ..	..	3	10	1	2	..	..	..	8	37	6	10	135	..	1	2	235	450
3	Grace Garden ..	..	1	..	..	..	..	..	..	2	24	2	13	91	..	..	2	120	255
4	Sanjeevirayanpet ..	..	2	3	..	..	..	..	..	8	13	4	3	28	..	..	..	168	229
5	Mottai Garden ..	..	..	..	..	..	..	1	..	1	19	2	4	39	..	..	1	203	270
6	Narayanappa Naicken Garden ..	..	..	3	..	..	..	1	..	1	12	..	7	19	..	1	1	159	204
7	Singara Garden ..	..	1	1	..	..	..	..	..	2	14	3	7	104	1	1	..	97	231
8	Royapuram ..	..	3	..	..	..	..	..	..	1	17	..	2	61	..	1	1	134	220
9	Meenakshiammenpet. ..	..	2	2	1	..	..	..	1	1	22	9	12	71	..	1	3	260	385
10	Old Washermenpet ..	..	4	2	..	3	..	1	..	1	24	7	4	39	..	..	..	243	328
11	Seven Wells (North)..	..	1	1	..	1	..	..	..	2	17	8	48	70	5	..	2	426	581
12	Ammen Koil North).	..	2	1	..	1	..	..	..	3	20	4	5	40	..	..	..	120	196
13	Muthialpet ..	..	..	1	..	..	1	..	..	8	6	17	6	29	..	..	1	151	220
14	Harbour ..	..	..	..	..	2	..	..	..	3	19	23	4	48	4	..	3	135	241
15	Mannady ..	..	3	7	..	1	..	..	1	2	2	7	6	24	1	1	2	66	123
16	Ammen Koil (South).	..	1	..	..	..	..	..	..	3	4	..	6	32	1	..	..	105	152
17	Seven Wells (South) ..	..	1	..	..	1	..	..	..	6	11	..	5	62	..	..	3	128	217
18	Sowcarpet ..	..	..	1	..	..	..	..	..	1	3	2	2	45	2	..	..	95	151
19	Kothavalchavadi ..	..	1	..	..	..	..	..	..	9	11	1	3	43	..	..	1	79	148
20	Katchaleeswarar Garden ..	..	..	..	..	1	1	..	..	1	29	2	4	107	..	1	3	9	158
21	Korukkunet ..	..	14	11	..	3	73	6	7	160	4	225	511						

24	Nagar	331	731
25	Basin Bridge	63	315
26	Kondithope	117	241
27	Peddu Naickenpet	173	280
28	Perumal Koil Garden.	157	242
29	Trevelyan Basin	55	117
30	Elephant Gate	80	126
31	Edapalayam	71	158
32	Perambur	171	373
33	Vysarpady	377	588
34	Pulianthope	375	615
35	Wadia Nagar	152	283
36	Thiru Vi-Ka-Nagar	51	389
37	Pattalam	74	169
38	Thattan Kulam	85	314
39	Dr. Besant Nagar	343	533
40	Choolai	158	251
41	Hospital Garden	92	239
42	Sembiam	255	420
43	Seru Vellore	165	265
44	Agaram	138	231
45	Nagamma Ammai Nagar	247	357
46	Ayanavaram	243	387
47	Nammalwarpet	209	397
48	Otteri	125	339
49	Kosapet	174	301
50	Perumalpet	102	198
51	Purasawalkam	146	253
52	Shenoy Nagar	277	373
53	Kilpauk	196	325
54	Chetpet	179	304
55	Nungambakkam	156	287

Deaths from Principal Causes Registered in the Division during the year 1964—(contd.)

Division No.	Name of the Division	Plague	Cholera	Small-Pox	Measles	Enteric Fever	Kala-Azar	Malaria	Influeza	Other Fevers	Dysentery	Diarrhoea	Tuberculosis including T.B. of Lungs	General Respiratory Diseases	Injuries	Maternal Deaths	Nepplasms	All other causes	Total deaths registered (excluding still-births)
55	Sevagam	..	..	4	..	..	..	1	..	29	20	10	3	70	1	1	..	136	275
56	Thousand Lights (West)	..	..	2	..	..	..	..	..	20	22	6	..	53	..	..	3	136	242
57	Thousand Lights (East)	..	1	6	..	..	..	..	..	10	16	3	4	52	4	..	1	103	200
58	Pudupakkam	..	..	1	..	..	..	..	..	2	12	3	1	100	..	2	3	130	254
59	Amir Mahal	..	..	3	..	..	..	..	..	2	18	9	24	186	2	..	3	57	304
60	Royapettah	..	..	5	..	..	..	..	..	..	13	5	11	56	..	1	3	243	337
61	Gangadeswarar Koil..	..	..	2	..	..	..	..	..	9	1	5	3	53	1	..	2	127	203
62	Dr. Ambedkar Nagar.	..	..	6	..	..	..	..	..	4	7	11	8	52	1	..	2	156	247
63	Periamet	..	..	6	..	1	..	..	..	13	10	6	7	57	1	1	8	220	330
64	Park Town	..	..	5	..	4	..	..	..	18	18	39	79	64	17	..	88	752	1,084
65	Adikesavapuram	..	..	..	..	1	..	..	..	10	8	18	5	95	1	..	3	117	258
66	Chintadripet	..	1	5	1	..	..	..	..	4	10	7	3	61	2	2	6	161	263
67	Egmore	..	..	3	..	..	..	1	..	8	9	44	12	44	3	7	5	315	451
68	Pudupet	..	1	4	..	..	..	..	..	9	7	18	7	55	..	..	3	153	257
69	Komaleeswaranpet	..	..	..	..	..	..	..	..	13	8	17	5	43	1	..	..	153	240
70	Narasingapuram	..	..	2	..	..	..	..	..	12	9	1	2	90	2	1	1	93	213
71	Nehru Nagar	..	..	..	..	1	..	..	..	19	26	12	4	48	3	1	..	155	269
72	Thiruvatteswaranpet..	..	1	5	..	..	..	..	..	1	13	10	1	59	..	..	1	178	269
73	Chepauk	..	3	4	..	1	..	..	..	17	8	6	4	29	1	1	4	149	227
74	Marina	..	3	6	..	2	1	..	..	4	12	15	2	59	1	..	..	192	297
75	Triplicane	..	..	3	..	..	..	..	..	1	11	6	4	20	..	..	..	141	186

Births, Deaths and Infant Deaths with rates by months in 1964 and 1963.

Months	1964						1963					
	Births registered excluding still births	Birth rate	Deaths registered excluding still births	Death rate	Infant Deaths	Infant death rate	Births registered excluding still births	Birth rate	Deaths registered excluding still births	Death rate	Infant deaths	Infant death rate
January	2,650	17.33	2,226	14.56	491	185.28	1,739	11.58	1,764	11.74	442	143.57
February	3,492	22.84	2,307	15.09	456	130.58	4,644	30.92	2,406	16.20	615	132.43
March	4,979	32.57	2,144	14.02	525	105.44	5,374	36.79	2,225	14.81	510	94.90
April	5,261	34.42	2,023	13.23	479	91.04	6,590	43.88	2,568	18.21	688	104.32
May	6,572	43.00	2,270	14.85	623	94.79	6,663	44.26	2,617	17.42	673	101.90
June	6,393	41.82	2,122	13.88	535	83.68	4,871	31.83	2,198	14.63	564	136.75
July	7,907	51.73	2,537	16.59	778	98.39	5,586	37.19	2,333	15.53	642	111.35
August	5,783	37.83	2,579	16.87	746	128.99	5,141	34.23	2,503	16.66	650	126.43
September	3,475	22.73	3,273	21.41	823	236.83	5,896	39.26	2,592	17.20	720	123.81
October	5,294	34.63	2,905	19.00	715	135.05	6,832	45.51	2,841	18.92	735	107.58
November	6,908	45.19	3,313	21.63	670	96.98	6,549	43.86	2,575	17.14	619	93.80
December	14,852	97.17	4,299	28.12	962	64.77	13,992	93.17	3,933	26.19	1,106	79.03
Total	73,566	40.11	31,998	17.44	7,803	106.45	73,787	40.94	30,555	16.95	7,944	107.66

Births, Deaths and Infant Deaths registered among principal communities during 1964 compared with 1963.

Community	1964			1963		
	Total number of birth registered excluding still births	Total number of deaths registered excluding still births.	Infant deaths registered.	Total number of births registered excluding still births.	Total number of deaths registered excluding still births.	Infant deaths registered.
Aliens ..	8	8	..	14	4	1
Anglo-Indians ..	137	95	7	211	79	8
Indian-Christians ..	2,906	1,439	296	3,430	1,340	295
Hindus ..	64,582	27,300	6,597	64,369	26,037	6,750
Muslims ..	5,909	3,113	902	5,739	3,075	890
Others ..	24	43	1	24	20	..
Total ..	73,566	31,998	7,803	73,787	30,555	7,944

Infant deaths among Principal Communities during 1964.

Community	Under seven days		Seven days and under one month		One month and under six months		Six months and under one year		Total		Total of Males and Females
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
Aliens	..	..	..	..	..	..	..	..	..	..	..
Anglo-Indians	2	..	..	..	1	1	3	..	6	1	7
Indian-Christians	30	20	27	12	43	52	53	59	153	143	296
Muslims	89	65	47	62	191	142	153	153	480	422	902
Hindus	988	761	433	410	1,039	935	989	1,042	3,449	3,148	6,597
Others	..	..	..	..	..	1	..	..	..	1	1
Total	1,109	846	507	484	1,274	1,131	1,198	1,254	4,088	3,715	7,803

Infant Deaths from Principal causes by Age periods in 1964.

Age Periods	Cholera		Small-pox		Measles		Diphtheria		Enteric Fever		Malaria		Other Fever		Dysentery		Diarrhoea		Infantile debility including pre-mature births, etc.		Diseases of the respiratory system		Convulsions		Other Causes		Total Infantile deaths			
	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate	Death	Rate		
Under one week	24	1.22	4	0.20	6	0.30	1068	54.62	147	7.51	6	0.30	700	35.85	1955	25.54					
	
	
	
One week and under one month	11	0.92	1	0.08	..	55	4.60	120	1.72	58	4.92	380	31.88	242	20.38	9	0.75	416	34.89	1192	15.30					
	
	
	
One month and under six months	2	0.09	26	1.17	1	0.0	4	46	2.08	202	9.16	302	13.70	161	7.30	920	41.7	27	1.22	517	23.45	2204	28.24					
	
	
	
Six months and under one year	3	0.12	59	2.40	4	0.16	4	0.16	2	60	2.44	249	10.15	392	5.98	21	0.85	854	34.82	13	0.44	790	32.20	2452	30.02					
	
	
	
Total	5	0.06	96	1.23	4	0.15	6	0.07	2	185	2.37	475	6.08	758	9.76	1630	20.88	2185	28.00	55	0.70	2401	30.77	7803	100.00					

Infant deaths from principal causes by month in 1964,

Months	Cholera	Small-pox	Measles	Diphtheria	Enteric fever	Malaria	Other fevers	Dysentery	Diarrhoea	Infantile debility and malformations including premature births	Diseases of the respiratory system	Cunvulsions	Other cases	Total infant deaths in 1964	Total infant deaths in 1963
January	..	3	..	..	..	..	16	33	70	110	151	9	99	491	422
February	..	11	..	..	..	..	17	38	55	133	132	5	65	456	615
March	..	12	..	..	..	..	12	29	48	143	146	3	132	525	510
April	..	6	..	2	..	..	22	24	37	123	199	4	62	479	688
May	..	11	3	1	1	..	23	27	43	136	177	2	199	623	673
June	..	15	1	..	..	..	21	31	59	136	112	6	154	535	564
July	..	11	..	1	1	..	4	48	54	125	249	..	275	778	642
August	..	5	..	..	..	..	13	57	49	123	224	3	272	746	650
September	..	8	..	1	..	..	10	62	76	137	153	2	374	823	720
October	..	4	..	1	..	1	14	53	93	143	272	7	127	715	735
November	3	6	..	..	..	..	11	41	89	147	180	6	187	670	619
December	2	4	..	..	..	..	12	32	85	202	190	8	427	962	1,106
Total	5	96	4	6	2	1	185	475	758	1,658	2,185	55	2,373	7,803	7,944

Statement of live births by age of mother and order of live births registered in order of confinement at live birth during 1964.

Age of Mother at birth	Other of confinement at live birth																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Not defi- ned	Total
Under 15 years	184	37	11	..	..	..	..	..	..	..	..	..	..	..	..	3	235
15 yrs. & under 20 yrs.	6,939	2,959	923	259	63	27	3	2	1	..	..	..	..	..	..	40	11,216
20 yrs. & under 25 yrs.	5,833	6,999	5,388	2,799	1,092	434	137	44	13	4	3	1	..	..	..	97	22,844
25 yrs. & under 30 yrs.	1,758	3,401	4,367	4,656	3,529	2,227	1,019	534	156	33	16	4	3	1	..	118	21,822
30 yrs. & under 35 yrs.	506	759	1,218	1,795	1,830	1,823	1,493	893	457	223	81	18	11	2	2	63	11,174
35 yrs. & under 40 yrs.	176	209	317	508	578	758	767	635	473	314	85	57	19	4	4	40	4,944
40 yrs. & under 45 yrs.	122	48	80	77	65	122	130	131	134	93	31	9	9	2	1	7	1,061
45 years	..	1	7	11	20	30	3	13	5	5	1	..	..	1	..	..	97
46 years	..	..	..	..	..	..	..	1	1	..	1	..	1	..	..	..	4
47 years	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
48 years	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
49 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
50 years	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	2
Not stated	22	27	24	18	21	12	10	2	4	..	2	..	..	1	4	18	165
Total	15,540	14,440	12,336	10,124	7,198	5,434	3,562	2,255	1,249	673	220	89	43	11	11	386	73,566

VITAL STATISTICS

Deaths registered from principal causes with rates in 1964 compared v

Year	Plague		Cholera		Small-pox		Measles		Enteric fever		Malaria		Other fev	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
1959	64	0.03	517	0.24	1	0.001	108	0.05	8	0.003	1,015	0
1960	521	0.23	2	0.000	137	0.06	4	0.001	1,341	0
1961	904	0.52	7	0.00	209	0.12	6	0.001	1,904	1
1962	55	0.03	316	0.17	5	0.002	86	0.04	5	0.002	1,028	0
1963	21	0.01	609	0.33	16	0.01	113	0.06	4	0.000	1,394	0
Mean of the previous five years	28	0.01	573	0.30	6	0.00	130	0.06	5	0.01	1,336	0
1964	153	0.08	573	0.31	12	0.00	58	0.03	5	0.00	773	0

STATISTICS SUPPLEMENT No. 15

e previous five years.

Dysentery		Diarrhoea		Tuberculosis including Tuberculosis of lungs		General Respiratory diseases		Injuries.		Maternal Deaths		All other causes		Total deaths	
Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
2,983	1.41	1,902	0.90	672	0.31	8,415	3.98	79	0.03	140	0.06	17,690	8.38	33,515	15.88
2,837	1.28	1,894	0.85	730	0.33	7,988	3.64	79	0.19	119	0.05	18,077	8.19	33,729	15.27
2,694	1.55	1,812	1.04	729	0.42	6,927	3.99	66	0.03	183	0.05	17,153	9.88	32,494	18.71
1,816	0.94	1,384	0.77	740	0.42	6,269	3.54	78	0.04	124	0.21	16,857	9.51	28,763	16.24
2,217	1.02	1,333	0.73	802	0.44	6,556	3.63	99	0.05	146	0.08	17,245	9.62	30,555	16.95
2,509	1.25	1,665	0.86	734	0.38	7,099	3.66	80	0.07	142	0.09	17,404	9.12	31,811	16.61
2,011	1.09	1,368	0.74	806	0.43	7,466	4.07	173	0.08	134	0.07	18,466	10.11	31,998	17.44

CORPORATION OF MADRAS
FOR
DETAILED RETURN OF DEATHS

Age at the time of deaths	Infectious diseases								Fevers				
	Cholera	Plague	Small-Pox	Measles	Chicken-pox	Typhoid or Enteric Fever	Diphtheria	Others	Malaria	Influenza	Relapsing Fever	Kala-Azar	Rheumatic Fever
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Under 24 hours ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Under one year {	Under one week ..	..	..	..	..	..	..	3	..	..	..	..	..
	Over one week and not exceeding one month. ..	..	..	11	..	..	1	4	..	..	..	..	..
	1—3 months ..	..	..	4	..	..	..	1	..	..	..	..	..
	Over 3 months and not exceeding 6 months ..	2	..	22	..	..	1	6	..	..	..	..	..
	Over 6 months and not exceeding 12 months ..	3	..	59	4	..	2	4	11	1	..	..	..
Total under one year ..	5	..	96	4	..	2	6	25	1	..	..	..	..
One year and under 5 years ..	35	..	177	3	2	4	29	26	2	4	..	1	3
5 years and under 10 years. ..	24	..	102	2	4	3	..	20	..	1	..	..	4
10 years and under 15 years ..	7	..	15	2	1	9	..	9	1	2	..	1	4
15 years and under 20 years ..	7	..	29	..	3	8	..	5	..	1	..	1	2
20 years and under 30 years ..	22	..	75	..	1	14	..	21	..	1	..	..	8
30 years and under 40 years ..	10	..	41	..	..	8	..	16	1	2	..	1	23
40 years and under 50 years ..	17	..	16	..	..	5	..	17	..	3	..	..	31
50 years and under 60 years ..	15	..	14	..	..	2	..	20	..	2	..	..	19
60 years and upwards ..	11	..	8	1	..	3	..	12	..	1	..	..	2
Total ..	153	..	573	12	11	58	35	171	5	17	..	4	96

* Total Births and Deaths sho

THE CITY OF MADRAS DURING THE YEAR 1964,

Respiratory diseases			Alimentary System			Diseases of the Liver		Circulatory System			Genito-urinary diseases excluding Veneral diseases		Veneral diseases		
Tuberculosis of Lungs	Pneumonia	Others	Dysentery	Diarrhoea	Others	Cirrhosis	Others	Heart diseases	Arterio Sclerosis	Others	Bright's diseases	Others	Syphilis	Gonorrhoea	Others
6	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
..	..	26	4	1	1	..	..	..	..	..	..	..	..	..	..
..	36	85	..	5	2	4	5	..	..	2	..	2	..	..	..
..	122	120	20	58	5	3	4	..	..	..	..	2	..	..	..
3	29	8	10	23	1	..	..	1	..	..	..	..	..	..	..
5	575	308	192	279	28	13	23	3	..	4	..	2	..	..	..
14	602	252	249	392	33	17	41	5	..	11	..	1	..	..	..
22	1364	799	475	758	70	37	73	9	..	17	..	7	..	..	..
90	1714	1349	921	310	101	40	66	8	2	25	1	28	..	..	..
21	308	163	163	53	22	16	13	13	1	22	1	13	..	..	..
12	68	67	20	21	8	5	4	18	..	25	1	5	..	..	..
40	36	52	24	14	11	6	15	32	1	26	1	8	..	..	..
164	81	132	36	25	35	16	25	56	1	84	4	25	1	..	1
177	84	157	61	32	79	37	40	145	..	142	20	131	2	..	..
134	200	186	102	32	51	24	47	171	1	161	26	27	..	1	1
94	180	218	109	56	61	41	38	231	2	189	20	38	..	3	1
52	171	137	100	67	50	16	15	170	4	203	2	40	..	..	1
806	4,206	3,260	2,011	1,368	488	238	336	853	12	894	76	322	3	4	4

Include "Still Births" 1,05,564

CORPORATION OF MADRAS
FOR

DETAILED RETURN OF DEATHS

Age at the time of death		Diseases of the Nervous System					Accidents or pregnancy and child-birth			Deficiency diseases			Malignant diseases			
		Convulsions	Cerebral haemorrhage (apoplexy)	Tetanus	Epilepsy	Others	Puerperal sepsis	Abortion	Other accidents and diseases of pregnancy and parturition	Beri-Beri	Rickets	Others	Alimentary tract	Genito-urinary	Breast	Other regions
		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Under 24 hours ..		..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Under one year	Under one week ..	6	..	14	..	5	..	..	..	..	..	19	..	..	..	..
	Over one week and not exceeding one month ..	9	..	3	..	8	..	..	..	..	..	25	..	..	..	..
	1—3 months ..	5	..	1	..	1	..	..	..	..	..	1	..	..	..	..
	Over 3 months and and exceeding 6 months ..	22	..	10	..	39	..	..	..	..	8	8	..	..	..	..
	Over 6 months and not exceeding 12 months. ..	13	..	4	..	17	..	..	..	..	4	14	..	..	..	..
Total under one year ..		55	..	32	..	71	..	..	..	..	12	67	..	..	..	..
One year and under 5 years ..		29	1	17	2	60	..	..	..	..	6	11	3	1	..	..
5 years and under 10 years ..		11	3	19	..	26	..	..	..	..	2	2	..	2	..	..
10 years and under 15 years ..		1	2	6	1	20	2	..	..	..	..	7	..	..	..	..
15 years and under 20 years ..		3	1	9	..	9	2	..	24	..	..	5	..	1	..	..
20 years and under 30 years ..		2	8	28	3	48	1	..	35	..	..	6	..	1	..	1
30 years and under 40 years ..		1	10	20	1	67	1	2	47	1	..	15	3	12	..	3
40 years and under 50 years ..		5	15	6	1	61	..	..	15	..	..	7	3	16	..	5
50 years and under 60 years ..		..	23	13	1	71	..	..	13	..	..	10	1	17	3	3
60 years and upwards ..		2	26	4	..	104	..	..	..	..	..	8	4	6	1	2
Total ..		109	89	154	9	537	6	2	134	1	20	138	14	56	4	18

*Total births and deaths should

THE CITY OF MADRAS DURING THE YEAR 1964.

47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Amoebiasis	Diabetes	Leprosy	Alcoholism	Congenital debility and malformation, Prema- ture birth	Rabies	Wounds and accidents	Snake-bite	Killed by wild beasts	Suicides	Poisons	Old age	All other causes	Total deaths from all cause	Total of Births and Deaths
..	..	..	..	491	..	..	..	..	..	..	..	142	675	M. F.
..	..	..	..	577	..	..	..	..	..	..	..	500	1,280	*Births
..	..	..	..	380	..	..	..	..	..	..	..	174	991	37,478—36,088
..	..	..	..	17	..	2	..	..	..	..	..	80	201	
..	..	..	..	144	..	6	..	..	..	..	..	457	2,204	
..	1	..	..	21	..	1	..	..	..	..	..	615	2,452	
..	1	..	..	1,630	..	9	..	..	..	..	..	1,968	7,803	Deaths
..	..	..	..	4	2	40	..	..	..	1	..	1,518	6,848	16,542—15,456
..	2	..	..	..	3	19	2	..	..	5	..	358	1,509	
..	..	..	..	..	2	28	2	..	10	4	..	117	561	Still Births
..	..	..	1	..	1	36	4	..	22	9	..	50	547	
..	1	2	2	..	2	66	2	..	54	25	..	440	1,603	776—758
1	6	2	2	..	2	23	4	..	29	7	..	62	1,602	
..	11	9	..	..	2	16	3	..	17	4	..	332	1,864	
..	23	2	..	..	..	14	2	..	19	2	207	585	2,441	
..	16	2	2	..	1	6	2	..	15	1	4,468	1,407	7,220	
1	60	17	7	1,634	15	257	21	..	166	58	4,675	6,837	31,998	

clude "Still Births" 1,04,342.

VITAL STATISTICS

STATISTICS SUPPLEMENT No. 17.

List of deaths according to cause groups during the year 1964.

GROUP I

Serial No.	Cause	Total No. of deaths
1	Typhoid ..	58
2	Para Typhoid ..	2
3	T.B. Respiratory system ..	360
4	T.B. All forms ..	446
5	Diphtheria ..	35
6	Small-pox ..	573
7	Influenza ..	17
8	Whooping Cough ..	40
9	Acute polimylitis and Polio Encephalitis ..	13

GROUP II

1	Cholera ..	153
2	Dysentery all forms ..	2,011
3	Scarlet fever and strepto coccal throat ..	11
4	Meningo coccal infection ..	10
5	Plague ..	..
6	Measles ..	12
7	Malaria ..	5
8	Malignant neoplasam ..	241
	(a) of Buccal Cavity and pharnyx ..	..
	(b) Uterus ..	..
	(c) Stomach and duodenum ..	66
	(d) Breast ..	7
	(e) All other sites ..	..

VITAL STATISTICS STATISTICS SUPPLEMENT No. 17—*contd.*

List of deaths according to cause groups during the year 1964

GROUP II—*contd.*

Serial No.	Cause	Total No. of deaths
9	Rheumatic fever ..	96
10	Chronic Rheumatic heart disease ..	9
11	Arterio-sclerotic and degenerative heart disease ..	9
12	Other diseases of heart ..	574
13	Hypertensive heart diseases ..	230
14	Pneumonia ..	4,206
15	Bronchitis ..	1,049
16	Motor vehicle accidents ..	25
17	All other accidents ..	148
18	Suicide and Self-inflicted injury ..	166
19	Homicide and operation of war ..	2
20	Anaemias ..	256
21	Cirrhosis of liver ..	221
22	Kala-Azar ..	4
23	Meningo Cerebral meningitis ..	20
24	Maternal deaths ..	134
25	Acute infectious encephalitis ..	164
26	Tetanus ..	197
27	Anthrax ..	1
28	Chicken-pox ..	11
29	Infective hepatitis ..	18
30	Rabies ..	15
31	Filariasis ..	..
32	Kwashiorkor ..	1

Certification of Cause of deaths for

1. Medically certified by:—

(a) Practitioners of modern medicines
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(b) Other medical practitioners
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2. Not medically certified but verified by medical and paramedical staff obtaining symptoms and conditions from the relations of the deceased
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3. Deaths certified by:—

(1) Medical Officers of Hospitals
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(2) Private Medical Practitioners
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(3) Hakims and Vaidas
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(4) Commissioner of Police
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(5) Coroner of Bombay and District Registrars
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Vaccinations performed by Health Staff during each month in 1964.

Months	Primary Vaccinations				Re-vaccinations			
	Number of persons vaccinated			Results	Number of persons Re-vaccinated			Results
	Males	Females	Total		Males	Females	Total	
January	2,839	2,640	5,479	5,473	11,795	13,649	25,444	10,402
February	3,414	3,098	6,512	6,365	20,313	24,465	44,778	12,589
March	2,817	2,671	5,488	5,425	18,446	15,683	34,129	10,626
April	2,390	2,488	4,878	4,878	12,539	12,324	24,863	9,806
May	1,592	1,575	3,167	3,136	14,675	14,214	28,889	9,667
June	2,220	2,143	4,363	4,363	6,251	6,581	12,832	7,243
July	2,210	2,136	4,346	4,346	6,349	6,898	13,247	5,094
August	1,837	1,858	3,695	3,695	8,598	9,438	18,036	9,622
September	1,924	1,943	3,867	3,867	7,396	7,720	15,116	7,737
October	1,869	1,717	3,586	3,586	8,501	7,531	16,032	7,867
November	1,575	1,539	3,114	3,114	5,503	5,561	11,064	6,526
December	2,583	2,672	5,255	5,255	6,178	6,350	12,528	6,312
Total	27,270	26,480	53,750	53,503	1,26,544	1,30,414	2,56,958	1,03,491
	..			6	241			1,04,957
								48,510

Particulars of Vaccinations performed in each Division during the year 1964.

Division No.	Name of the Division	Total number of Persons vaccinated			Primary vaccination.							Re-vaccination.					Percentage of successful cases in which the results are known					
		Males	Females	Total	Males	Females	Total	Successful				Total			Result							
								Under one year	One year and under 5 years	5 years and under 10 years	Ten year and above	Total	Unsuccessful	Unknown	Males	Females		Total	Successful	Failure	Absent	
1	New Washermenpet ...	1,019	977	1,996	278	238	516	321	136	59	..	516	..	..	741	739	1,480	151	1,133	196	100.00	10.20
2	Tondiarpet ...	682	721	1,403	199	192	391	251	106	34	..	391	..	..	483	529	1,012	136	690	186	100.00	13.43
3	Grace Garden ...	687	889	1,576	171	172	343	201	106	36	..	343	..	..	516	717	1,233	163	915	155	100.00	13.21
4	Sanjeevirayanpet ...	633	622	1,255	166	149	315	181	92	42	..	315	..	..	467	473	940	120	547	273	100.00	12.76
5	Mottai Garden ...	549	524	1,073	154	146	300	226	74	..	..	300	..	..	395	378	773	195	369	209	100.00	25.22
6	Narayanappa Naicken Garden	2,715	3,722	6,437	89	73	162	135	27	..	..	162	..	..	2,626	3,649	6,275	218	4,510	1,547	100.00	3.47
7	Singara Garden ...	600	671	1,271	193	148	341	196	106	39	..	341	..	..	407	523	930	120	687	123	100.00	12.90
8	Royapuram ...	635	593	1,228	198	122	320	192	92	36	..	320	..	..	437	471	908	133	636	139	100.00	14.64
9	Meenakshiammenpet.	662	749	1,411	97	129	226	226	..	..	..	226	..	..	565	620	1,185	237	638	310	100.00	20.00
10	Old Washermenpet ...	662	749	1,411	164	151	315	266	49	..	..	315	..	..	498	598	1,096	240	554	302	100.00	21.89
11	Seven Wells (North) ...	1,126	1,492	2,618	192	195	387	291	96	..	..	387	..	..	934	1,297	2,231	898	1,058	275	100.00	40.25
12	Ammen Koil (North).	964	1,067	2,031	191	176	367	259	108	..	..	367	..	..	773	891	1,664	546	929	189	100.00	32.81
13	Muthialpet ...	980	1,569	2,549	231	228	459	271	188	..	..	459	..	..	749	1,341	2,090	703	1,242	145	100.00	9.91
14	Harbour ...	1,674	662	2,336	187	177	364	176	185	3	..	364	..	..	1,487	485	1,972	1,024	692	256	100.00	51.92
15	Mannady ...	1,115	640	1,755	126	125	251	190	61	..	..	251	..	..	989	515	1,504	501	735	268	100.00	33.31
16	Ammen Koil (South)	434	1,456	1,890	107	87	194	165	29	..	..	194	..	..	327	1,369	1,696	549	946	201	100.00	32.37
17	Seven wells (South) ...	918	1,295	2,213	268	262	530	386	141	1	2	530	..	..	650	1,033	1,683	666	993	24	100.00	39.57
18	Sowcarpet ...	942	584	1,526	154	149	303	196	100	..	7	303	..	..	788	435	1,223	168	1,055	...	100.00	13.73
19	Kothavalchavadi ...	635	1,485	2,120	167	194	361	240	99	21	..	361	1	..	468	1,291	1,759	371	1,354	34	99.72	21.09
20	Katchaleeswarar Garden	1,941	935	2,876	108	123	231	155	76	..	..	231	..	..	1,833	812	2,645	1,000	1,288	357	100.00	37.80
21	Korukkupet ...	1,151	778	1,929	287	290	577	355	210	12	..	577	..	..	864	488	1,352	365	466	521	100.00	26.99
22	Kumarasamy Nagar...	1,356	1,409	2,765	379	324	703	307	390	6	..	703	..	..	977	1,085	2,062	558	836	668	100.00	27.06
23	Dr. Vijayaragavalu Nagar	1,048	1,035	2,083	341	334	675	385	210	80	..	675	..	..	707	701	1,408	231	522	555	100.00	16.40
24	Basin Bridge ...	1,988	1,568	3,556	473	568	1,041	331	541	18	..	890	3	148	1,515	1,000	2,515	274	1,114	1,127	85.49	10.89
25	Kondithope ...	1,323	1,100	2,423	465	278	743	310	317	21	..	648	2	93	858	822	1,680	133	777	770	87.21	7.90
26	Peddu Naickenpet ...	1,014	993	2,007	267	276	543	331	188	24	..	543	..	..	747	717	1,464	145	1,149	170	100.00	9.90
27	Perumal Koil Garden.	1,379	1,183	2,562	203	201	404	319	77	8	..	404	..	..	1,176	982	2,158	187	1,654	317	100.00	8.68
28	Trevelyan Basin ...	1,048	902	1,950	179	202	381	214	146	21	..	381	..	..	869	700	1,569	274	1,109	186	100.00	17.46
29	Elephant Gate ...	1,093	859	1,952	288	267	555	248	277	30	..	555	..	..	805	592	1,397	248	892	257	100.00	17.75

Division No.	Name of the Division	Total number of persons vaccinated			Primary Vaccination										Re-vaccination.					Percentage of successful cases in which the results are known			
		Males	Females	Total	Total			Successful							Total			Result					
					Males	Females	Total	Under one year	One year and under 5 years	5 years and under 10 year	Ten years and above	Total	Unsuccessful	Unknown	Males	Females	Total	Successful	Failure		Absent	Primary	Re-Vaccination.
76	Zam Bazaar	1,242	701	1,943	227	228	455	401	54	..	..	..	455	..	..	1,015	473	1,488	103	1,134	251	100.00	6.92
77	Mirsaibipet	909	895	1,804	273	272	545	434	111	..	..	..	545	..	..	636	623	1,259	141	991	127	100.00	11.19
78	Azad Nagar	2,355	2,397	4,752	389	351	740	400	340	..	..	..	740	..	..	1,966	2,046	4,012	209	3,428	375	100.00	5.20
79	Durgapuram	1,998	1,796	3,794	238	225	463	307	142	14	..	..	463	..	..	1,760	1,571	3,331	1,109	1,441	781	100.00	33.29
80	Krishnampet	2,104	2,465	4,569	199	199	398	268	126	4	..	..	398	..	..	1,905	2,266	4,171	973	2,592	606	100.00	23.37
81	Teynampet	1,621	1,887	3,508	244	420	664	542	122	..	..	..	664	..	..	1,377	1,467	2,844	341	1,812	691	100.00	11.99
82	Vivekanandapuram	2,278	2,524	4,802	242	236	478	306	172	..	..	..	478	..	..	2,036	2,288	4,324	829	2,310	1,185	100.00	19.17
83	Madava Perumal puram	1,744	1,488	3,232	257	215	472	303	169	..	..	..	472	..	..	1,487	1,273	2,760	409	1,466	885	100.00	14.81
84	Karniswarapuram	1,198	1,049	2,247	302	213	615	468	137	10	..	..	615	..	..	896	736	1,632	295	825	512	100.00	18.07
85	Santhome	1,425	2,476	3,901	236	265	501	344	157	..	..	..	501	..	..	1,189	2,211	3,400	258	2,732	410	100.00	7.58
86	Mylapore	1,684	1,523	3,207	226	189	415	304	111	..	..	..	415	..	..	1,458	1,334	2,792	256	2,044	492	100.00	9.16
87	Bheemannaipet	1,039	1,160	2,199	239	321	560	286	260	14	..	..	560	..	..	800	839	1,639	270	835	534	100.00	16.47
88	Alwarpet	948	1,185	2,133	158	274	432	286	133	13	..	..	432	..	..	790	911	1,701	183	1,044	474	100.00	10.75
89	Raja Annamalaipuram	1,426	1,648	3,074	255	265	520	346	70	4	..	..	520	..	..	1,171	1,383	2,554	117	1,733	704	100.00	4.58
90	Adayar	846	1,088	1,934	136	148	284	179	183	19	3	..	284	..	..	710	940	1,650	108	1,010	532	100.00	6.54
91	Aminjikarai	1,037	1,043	2,080	357	366	723	497	216	10	..	..	723	..	..	680	677	1,357	578	657	122	100.00	42.60
92	Vadapalani	1,393	1,138	2,531	400	344	744	536	198	10	..	..	744	..	..	993	794	1,787	675	929	183	100.00	37.77
93	Theagarayanagar	1,082	1,130	2,212	214	217	431	276	136	19	..	..	431	..	..	868	913	1,781	173	1,360	248	100.00	9.71
94	Sathyamoorthi Nagar	1,952	1,084	3,036	369	230	599	481	96	22	..	..	599	..	..	1,583	854	2,437	772	1,417	248	100.00	31.67
95	Rajaji Nagar	1,342	597	1,939	308	220	528	359	155	14	..	..	528	..	..	1,034	377	1,411	266	1,093	52	100.00	18.85
96	Kamaraj Nagar	525	477	1,002	181	195	376	289	82	5	..	..	376	..	..	344	282	626	163	373	90	100.00	26.03
97	Saidapet (North)	1,531	1,310	2,841	230	198	428	285	132	11	..	..	428	..	..	1,301	1,112	2,413	852	1,139	422	100.00	35.30
98	Periapet	1,883	1,859	3,742	204	208	412	302	109	1	..	..	412	..	..	1,679	1,651	3,330	417	2,143	770	100.00	12.52
99	Guindy	3,036	2,729	5,765	393	411	804	616	180	8	..	..	804	..	..	2,643	2,318	4,961	1,253	2,607	1,101	100.00	25.25
100	Saidapet (South)	1,258	992	2,250	210	197	407	338	69	..	..	..	407	..	..	1,048	795	1,843	370	1,190	283	100.00	20.07
Total		1,53,814	1,56,894	3,10,708	27,270	26,480	53,750	37,042	15,472	967	22	53,503	6	241	1,26,544	1,30,414	2,56,958	48,241	1,59,807	78,910	99.54	18.77	

Serial Number	Defects	Boys						Girls											
		Entrants			Regulars			Total No. of Entrants and Regulars			Entrants			Regulars			Total No. of Entrants Regulars		
		No. Defective	Percentage		No. Defective	No. Defective	Percentage		No. Defective	No. Defective	Percentage		No. Defective	No. Defective	Percentage		No. Defective	No. Defective	Percentage
			1964	1963			1964	1963			1964	1963			1964	1963			
1	Malnutrition	19	5.21	3.74	34	497	5.78	53	5.37	449	10.10	10.83	453	7.52	11.01	860	17.20		
2	Dirty Head, Body and nails	1	0.317	1.05	12	1.82	1.01	13	1.31	29	0.723	0.78	39	0.697	0.48	68	0.731		
3	Teeth and mouth	53	14.23	26.52	87	14.31	17.11	140	14.72	483	10.92	9.98	800	13.72	9.13	1,258	12.40		
4	Nose and Throat	3	0.815	1.05	6	0.982	1.25	9	0.92	422	9.52	10.67	524	8.72	12.35	910	9.23		
5	Eye diseases	..	..	1.28	3	0.311	0.72	3	0.311	239	5.37	11.05	172	2.82	3.84	381	3.71
6	Vision	..	..	0.12	..	..	..	..	..	21	0.531	0.41	33	0.692	0.64	451	4.42
7	Ear diseases	4	0.873	1.05	1	0.164	0.96	5	0.520	43	0.924	0.97	63	1.37	0.99	106	1.31		
8	Hearing	..	..	..	..	..	..	..	..	..	..	0.06	1	0.013	0.11	1	0.009
9	Speech	1	0.280	..	..	..	..	1	0.13	1	0.026	..	2	0.026	0.08	3	0.031
10	Circulatory system	6	1.82	3.04	8	1.35	3.28	14	1.47	124	2.82	2.95	143	2.410	2.15	258	2.61		
11	Tuberculosis	..	..	..	..	..	..	..	..	1	0.026	0.06	2	0.026	0.13	3	0.031
12	Respiratory system	..	..	..	..	..	..	..	..	102	2.272	2.04	102	1.820	1.29	196	1.14
13	Abdominal system	..	..	..	..	..	..	..	..	..	..	0.06	2	0.026	..	4	0.039
14	Bones and joints	16	4.82	2.92	30	8.90	2.21	46	4.62	51	1.13	1.51	6	0.078	0.56	56	0.64		
15	Nervous and Psychic systems	..	..	..	..	..	..	..	..	..	..	..	1	0.013	0.56	1	0.009
16	Infectious and Contagious diseases	7	2.18	5.02	4	0.662	3.52	11	1.14	484	9.13	13.15	428	7.83	7.41	882	8.72		
17	Other diseases and defects	30	7.92	5.72	30	4.80	1.40	60	6.31	137	3.81	2.67	91	1.37	2.60	224	2.21		
18	Vaccination	..	..	0.35	..	..	0.43	..	..	..	..	..	..	..	..	..	..
19	Deformities	3	0.837	1.99	4	0.641	2.27	7	0.72	12	0.352	0.38	12	0.156	0.19	22	0.24		

MEDICAL INSPECTION

Groups	No. on Roll		Average Daily Attendance		Number Examined		Number Defective		Percentage	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Entrants ..	437	5,436	398	4,489	377	4,442	144	2,381	37	5
Regulars ..	683	6,731	621	5,984	618	5,972	224	2,071	36	3
Total ..	1,120	12,167	1,019	10,473	995	10,414	368	4,452	36	4

TREATMENT TABLE

Sex	Number treated at school	Number sent to Corporation Dispensaries	Number referred to Government Hospitals	Number referred to Government Ophthalmic Hospitals	Number referred to Government Tuberculosis Hospitals	Number of parents met	Number of re-visits paid to schools	Number of re-examination of school children
Boys ..	239	12	97	11	Nil	72	3	19
Girls ..	3,291	410	587	Nil	Nil	341	106	2,51
Total ..	3,530	422	684	11	Nil	413	109	2,71

MEDICAL INSPECTION

Height and Weight Table

Age	Average height in inches		Average weight in pounds		Quinquennial average height in inches		Quinquennial average weight in pounds	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
6	40.713	41.351	31.220	32.523	39.042	38.131	29.522	31.061
7	41.913	42.641	33.412	33.221	39.510	42.222	34.232	34.961
8	42.732	44.032	35.910	37.122	40.121	42.623	37.021	38.522
9	44.823	46.530	40.311	39.753	43.911	44.021	39.540	40.451
10	46.370	49.521	46.352	45.130	45.610	47.372	44.032	44.512
11	49.331	49.520	48.753	51.812	47.633	50.041	47.644	50.430
12	49.420	51.851	53.021	57.822	52.111	53.440	50.011	50.953
13	53.641	55.920	55.212	59.320	53.512	54.331	54.421	57.310
14	54.823	57.531	61.311	63.541	53.620	56.322	58.540	61.021
15	56.310	59.222	62.031	74.011	56.542	60.930	64.721	68.642
16	58.361	60.422	65.422	83.510	59.331	61.021	69.031	80.520
17	59.410	63.121	68.120	87.311	60.240	65.433	80.574	83.952
18	61.312	..	79.512	..	62.951	..	84.851	..

WATER ANALYSIS

STATEMENT No. I

The number of samples of water tested for Chemical,
Bacteriological purposes in 1964

Serial No.	Description of samples	Number of samples
1	From the sources of the Kortalar river system ..	16
2	From the Head works at Kilpauk Water Works ..	1,732
3	From the Infiltration Gallery Wells at Sembiam ..	10
4	From the Infiltration Gallery Wells at Saidapet ..	12
5	From the City distribution systems ..	684
6	From the Sembiam distribution systems ..	106
7	From the Saidapet distribution systems ..	83
8	From the shallow wells at Adayar, Kodambakkam, Guindy, Triplicane, Marina and North Madras ..	179
9	From private samples (including complaints) ..	300
10	From sewage and sewage effluent ..	5
11	From the Special Samples ..	6
12	From the Emergency Wells ..	56
13	From microscopical examination ..	71
Total ..		3,260

Monthly average levels in three Reservoirs and the total monthly rainfall recorded in their catchments in 1964

Months	Sathyamoorthy Sagar (Poondi Reservoir)		Sholavaram Reservoir		Red Hills Reservoir	
	Average lake level in feet	Rainfall in m.m.	Average lake level in feet	Rainfall in m.m.	Average lake level in feet	Rainfall in m.m.
January	137.75	Nil	60.33	Nil	45.86	Nil
February	137.20	Nil	58.62	Nil	44.92	Nil
March	136.40	Nil	49.00	Nil	44.94	Nil
April	135.58	Nil	47.58	Nil	43.80	Nil
May	134.60	34.50	47.00	Nil	41.90	Nil
June	132.30	59.50	55.84	62.50	39.80	26.69
July	131.45	143.95	52.54	115.50	38.79	57.30
August	129.00	85.90	55.24	120.80	39.62	107.60
September	126.00	139.01	60.29	150.38	43.17	115.57
October	125.70	145.80	58.56	197.50	44.34	142.20
November	137.24	318.32	62.00	504.82	45.87	322.14
December	137.00	19.05	62.12	20.10	45.87	20.10

Limnological conditions of the sources of the City Water Supply (a) Sathyamoorthy Sagar in 1964
(Results expressed in parts per 100,000)

Description	25-2-64	23-6-64	6-9-64	28-11-64	28-12-64		
<i>A. Physical Conditions:</i>							
Time	3-30 P.M.	3-45 P.M.	11-00 A.M.	2-30 P.M.	3-15 P.M.	..	..
Depth in feet (above mean sea-level)	136.97	132.05	128.90	138.0	136.99	..	..
Colour	W	Y	G	W	S.Y	..	..
Temperature (°C)	30.5	31	32.5	..	26.1	..	..
Turbidity (p.p.m.) Silica scale	10.0	35.0	56.0	10.0	28.0	..	..
<i>B. Chemical conditions:</i>							
Total solids	29.4	30.8	32.0	28.0	38.0	..	..
Total hardness	9.2	6.8	7.0	11.2	12.2	..	..
Calcium hardness	3.4	2.8	3.6	6.4	6.4	..	..
Magnesium hardness	5.8	4.0	3.4	4.8	5.8	..	..
Chlorides	4.79	6.1	5.0	4.0	4.8	..	..
Ammoniacal Nitrogen	0.002	Nil	0.019	0.004	0.004	..	..
Albuminoid Nitrogen	0.040	0.040	0.080	0.040	0.048	..	..
Nitrous Nitrogen	Nil	Nil	Nil	Nil	Nil	..	..
Nitric Nitrogen	Nil	Tr.	Nil	Nil	Nil	..	..
Oxygen absorbed (Tidy's)	0.190	0.386	0.360	0.196	0.283	..	..
Alkalinity to Phenolphthalein	1.0	2.2	1.6	1.0	1.0	..	..
Alkalinity to Methyl orange	17.4	17.7	15.0	18.0	20.0	..	..
Phosphates	Nil	0.001	Nil	0.001	0.001	..	..
Silicates	1.6	2.0	1.8	1.8	2.0	..	..
Sulphate	1.4	2.4	2.6	2.2	2.4	..	..
Iron	0.01	Tr.	0.04	0.01	0.02	..	..
pH.	8.8	9.2	8.7	8.5	8.5	..	..
Sp. conductivity at 25 °C (micromhos/Cm.)	435	485	410	410	485	..	..
Dissolved oxygen (cc/l)	5.95	6.23	5.04	6.72	5.67	..	..
% Saturation						..	..
<i>C. Bacteriological conditions:</i>							
M.P.N. of coliforms in 100 ml.	2	∞	∞	∞	∞	..	∞

Limnological conditions of the sources of the City Water Supply (b) Sholavaram Reservoir in 1964
(Results expressed in parts per 100,000)

H. R. - 51

Description	25-2-64	23-6-64	6-9-64	28-11-64	28-12-64
<i>A. Physical conditions:</i>					
Time	4-30 P.M.	1-15 P.M.	4-00 P.M.	12-15 P.M.	12-45 P.M.
Depth in feet (above mean sea-level)	58.47	55.59	51.44	62.12	62.12
Colour	W	G.Y	G.Y	W	W
Temperature (°C)	29	33	33.5	28	26.5
Turbidity (p.p.m.) silica scales	15.5	98	85	24.5	14.0
<i>B. Chemical conditions:</i>					
Total solids	29.0	40.8	40.0	26.0	26.0
Total hardness	10.4	8.4	7.6	7.4	10.2
Calcium hardness	5.2	4.0	4.0	4.4	5.6
Magnesium hardness	5.2	4.4	3.6	3.0	4.6
Chlorides	4.9	6.7	6.2	3.4	4.0
Ammoniacal Nitrogen	0.002	Nil	0.002	0.004	0.004
Albuminoid Nitrogen	0.040	0.040	0.048	0.040	0.048
Nitrous Nitrogen	Nil	Nil	Nil	Nil	Nil
Nitric Nitrogen	Nil	Tr.	Nil	Nil	Nil
Oxygen absorbed (Tidy's)	0.195	0.448	0.391	0.165	0.160
Alkalinity to Phenolphthlein	0.2	0.5	0.5	0.4	0.6
Alkalinity to Methyl orange	14.0	17.5	16.8	10.8	12.4
Phosphates	Nil	Nil	Nil	0.001	0.001
Silicates	1.6	2.0	1.8	1.6	2.0
Sulphate	1.4	2.0	2.0	1.8	1.6
Iron	0.01	0.02	0.04	0.02	0.01
pH.	8.5	8.7	8.5	8.4	8.5
Sp. conductivity at 25 °C (micromhos/cm)	430	535	500	305	410
Dissolved oxygen (cc./l)	5.95	6.23	5.43	6.16	5.95
% Saturation	..	..	..	..	..
<i>C. Bacteriological conditions:</i>					
M.P.N. of coliforms in 100 ml.	26	∞	∞	∞	∞

Limnological conditions of the sources of the City Water Supply (c) Red Hills Reservoir in 1964.
(Results expressed in parts per 100,000)

Description		25-2-64	23-6-64	6-9-64	1-10-64	28-11-64	28-12-64
<i>A. Physical conditions:</i>							
Time	..	5-45 P.M. 44.53 S.Y.	12-30 P.M. 39.33 S.Y.	5-00 P.M. 41.60 S.G.	4-00 P.M. .. Y.	11-30 A.M. 45.87 S.Y.	12 Noon 45.87 S.Y.
Depth in feet (above mean sea-level)	..	29	31	31.5	29.5	29	26
Colour	..	12.5	15.5	31.5	29.5	24.5	21.5
Temperature (C)	..						
Turbidity	..						
<i>B. Chemical conditions:</i>							
Total solids	..	28.8	32.0	36.0	36.0	29.0	30.0
Total hardness	..	8.2	9.0	8.4	8.2	7.2	8.0
Calcium hardness	..	3.8	4.4	3.4	3.4	4.0	4.2
Magnesium hardness	..	4.4	4.6	5.0	4.8	3.2	3.8
Chlorides	..	5.4	6.6	7.0	6.4	5.8	4.6
Ammoniacal Nitrogen	..	Nil	Nil	0.003	0.002	0.002	0.003
Albuminoid Nitrogen	..	0.040	0.040	0.064	0.048	0.040	0.048
Nitrous Nitrogen	..	Nil	Nil	Nil	Nil	Nil	Nil
Nitric Nitrogen	..	Nil	Tr.	Nil	Nil	Nil	Nil
Oxygen absorbed (Tidy's)	..	0.211	0.256	0.350	0.397	0.205	0.258
Alkalinity to Phenolphthalein	..	0.8	0.8	0.9	0.6	1.2	1.0
Alkalinity to Methyl orange	..	13.6	15.5	16.7	16.8	13.0	12.4
Phosphates	..	Nil	0.001	Nil	Nil	0.001	0.001
Silicates	..	1.6	2.0	1.8	1.6	1.6	1.8
Sulphate	..	2.1	2.4	2.2	2.0	1.8	1.8
Iron	..	Tr.	Tr.	0.01	Tr.	0.01	Tr.
pH.	..	8.9	8.7	8.7	8.9	8.7	8.8
Sp. conductivity at 25° C micromhos/cm.)	..	430	510	520	490	375	385
Dissolved oxygen (cc/l)	..	5.25	5.11	5.32	5.81	6.23	5.95
% Saturation	..	97	97	103	108	115	104
<i>C. Bacteriological conditions:</i>							
M.P.N. of coliforms in 100 ml.	..	542	∞	∞	∞	∞	∞

Salient Physical, Chemical and Bacteriological data for chlorinated Raw water—1964

(Results expressed in parts per 100,000)

Months	No. of samples	Colour	Turbidity (p.p.m.)	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Aluminoid Nitrogen	Nitrites	Nitrates	Oxygen absorbed (Tidy's)	Alkalinity to		pH.	Iron	Phosphaty	Silicates	Sp. Conductance (micromhos/cm.)	Bacteriological % of first class sam- ples (M.P.N. of coliforms none in 100 ml.)
												Phenol- pthalein	Methyl orange						
January	21	S.Y.	11.0	27.0	8.0	5.4	0.002	0.040	Nil	Tr.	0.169	1.0	12.9	8.7	Tr.	0.001	1.8	410	33
February	23	S.Y.	11.0	27.5	8.3	5.3	0.002	0.046	Nil	Nil	0.172	0.6	13.4	8.4	0.01	Nil	1.9	410	48
March	25	S.Y.	11.5	28.2	8.5	5.6	0.002	0.047	Nil	Tr.	0.173	0.6	13.7	8.6	Tr.	Nil	1.8	430	40
April	23	S.Y.	13.2	31.0	8.6	6.8	0.004	0.044	Tr.	Tr.	0.189	1.0	13.9	8.7	Tr.	0.001	1.8	450	21
May	23	S.Y.	12.5	31.4	8.7	6.2	0.002	0.048	Nil	Tr.	0.171	1.0	14.7	8.8	Tr.	0.001	2.0	470	9
June	24	S.Y.	13.5	32.8	9.0	6.6	0.002	0.051	Tr.	Tr.	0.200	1.0	15.4	8.7	0.01	Nil	2.2	500	0
July	26	Y.	21.8	34.2	9.3	7.0	0.002	0.068	Nil	Nil	0.224	0.9	16.0	8.5	0.01	0.001	2.1	520	4
August	24	Y.	30.1	36.2	8.8	7.1	0.004	0.048	Tr.	Nil	0.306	0.8	16.8	8.7	0.01	0.001	2.0	520	37
September	23	Y.	24.7	34.6	8.1	7.0	0.004	0.051	Nil	Nil	0.281	0.8	16.4	8.7	0.01	Nil	1.9	510	26
October	22	Y.	31.5	34.2	8.2	6.5	0.005	0.043	Nil	Tr.	0.297	0.8	16.2	8.5	0.01	0.001	1.9	510	64
November	23	S.Y.	21.3	31.4	7.9	5.7	0.004	0.048	Nil	Nil	0.247	0.8	14.7	8.4	0.01	0.001	2.0	445	44
December	26	S.Y.	17.0	29.4	7.7	4.8	0.002	0.044	Nil	Nil	0.180	0.7	12.5	8.3	0.01	0.001	1.7	375	85

WATER ANALYSIS

STATEMENT No. VII

Salient Physical, Chemical and Bacteriological data for filtrates from slow sand filters—1964
(Results expressed in parts per 100,000)

Months	No. of samples	Colour	Turbidity (p.p.m.)	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrites	Nitrates	Oxygen absorbed (Tidy's)	Alkalinity to		pH	Iron	Phosphates	Silicates	Sp. conductance (micromhos/cm.)	Bacteriological % of first class samples (M.P.N. of coliforms none in 100 ml.)
												P.T.H.	M.O.						
January	21	C & C	5.2	26.0	8.2	5.1	0.002	0.040	Tr.	Tr.	0.133	0.7	13.0	8.5	Tr.	0.001	1.8	410	0
February	23	C & C	4.3	27.2	8.5	5.3	0.003	0.042	Tr.	Nil	0.157	0.3	13.5	8.4	Tr.	Nil	1.9	410	4
March	25	C & C	6.6	27.6	8.4	5.5	0.011	0.035	Tr.	Tr.	0.159	0.5	13.9	8.3	Tr.	Nil	1.7	430	0
April	23	C & C	4.1	30.9	8.6	5.8	0.028	0.046	Tr.	Tr.	0.192	0.3	14.1	8.2	Tr.	0.001	1.8	450	0
May	23	C & C	5.6	30.4	8.6	6.1	0.017	0.046	Nil	Nil	0.176	0.7	14.9	8.3	0.01	0.001	2.0	470	0
June	24	C & C	6.6	31.8	9.1	6.5	0.009	0.047	Tr.	Tr.	0.196	0.6	15.5	8.3	0.01	Nil	2.1	500	0
July	26	C & H	12.0	33.2	9.2	7.0	0.006	0.056	Pr.	Tr.	0.212	0.7	16.4	8.2	0.01	0.001	2.2	520	0
August	24	S.Y.	17.6	34.8	8.8	7.0	0.013	0.048	Tr.	Nil	0.314	0.6	16.9	8.3	0.01	0.001	2.0	520	0
September	24	S.Y.	14.0	34.0	8.1	6.8	0.011	0.048	Nil	Nil	0.339	0.6	16.8	8.4	0.01	Nil	1.9	510	0
October	22	C & H	10.0	33.0	8.1	6.2	0.016	0.045	Pr.	Tr.	0.289	0.2	16.4	8.2	0.01	0.001	2.0	510	4
November	23	C & C	15.3	31.4	8.6	5.8	0.020	0.046	Tr.	Nil	0.234	Nil	14.8	8.0	0.01	0.001	1.9	460	4
December	26	C & C	6.5	26.8	7.8	4.7	0.012	0.030	Pr.	Nil	0.180	Nil	12.3	8.0	0.01	0.001	1.7	375	15

Salient Physical, Chemical and Bacteriological data for filtrates from Rapid Gravity Filters—1964

(Results expressed in parts per 100,000)

Months	No. of samples	Colour	Turbidity (p.p.m.)	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrite	Nitrate	Oxygen absorbed (Tidy's)	Alkalinity to		pH.	Iron	Phosphates	Silicates	Sp. conductance (micromhos/cm.)	Bacteriological % of first class samples (M.P.N. of coliforms none in 100 ml.
												P.T.H.	M.O.						
January	21	C & C	3.1	27.8	9.4	5.2	Nil	0.040	Nil	Tr.	0.075	Nil	10.6	7.7	Nil	Nil	1.6	430	19
February	23	C & C	3.9	28.8	8.8	5.4	0.002	0.040	Nil	Nil	0.107	Nil	12.3	8.1	0.01	0.001	1.8	440	31
March	25	C & C	4.5	29.8	9.4	5.5	0.002	0.038	Nil	Nil	0.095	Nil	12.6	8.1	Tr.	0.001	1.7	460	24
April	23	C & C	3.7	30.3	9.5	5.8	0.002	0.046	Nil	Nil	0.077	Nil	13.0	8.0	Tr.	0.001	1.9	470	43
May	23	C & C	4.9	31.6	9.6	6.1	0.002	0.042	Tr.	Nil	0.102	0.4	13.6	8.2	0.01	0.001	2.0	490	26
June	24	C & C	3.9	32.0	10.2	6.7	0.002	0.047	Tr.	Tr.	0.126	Nil	14.0	7.8	0.01	Nil	2.1	520	8
July	26	C & C	8.4	35.0	10.6	7.0	0.003	0.038	Tr.	Tr.	0.139	Nil	15.2	8.1	0.01	0.002	2.1	545	8
August	22	W	7.8	35.2	9.9	7.1	0.003	0.046	Tr.	Nil	0.183	Nil	15.3	8.0	0.01	0.001	2.0	570	43
September	24	W	6.0	35.3	9.1	7.0	0.004	0.038	Nil	Nil	0.187	Nil	15.1	7.9	0.01	0.001	1.9	540	13
October	22	C & C	8.0	32.8	8.7	6.5	0.003	0.040	Nil	Tr.	0.201	Nil	15.1	7.8	0.01	0.001	1.9	515	23
November	23	C & C	5.3	30.2	9.3	5.9	0.003	0.040	Nil	Nil	0.156	Nil	13.7	7.8	Tr.	0.001	1.9	475	0
December	26	C & C	4.3	26.0	8.4	4.9	0.003	0.044	Nil	Nil	0.120	Nil	11.6	7.8	0.01	0.001	1.8	405	23

WATER ANALYSIS

STATEMENT No. IX

Salient Physical, Chemical and Bacteriological data for Test tap samples collected from Test Tap at the Kilpauk Pumping Station—1964

(Results expressed in parts per 100,000)

Months	No. of samples	Colour	Turbidity (p.p.m.)	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrite	Nitrate	Oxy. absorbed (Tidy's)	Alkalinity to		pH.	Iron	Phosphates	Silicates	Sp. conductance (microhms/cm.)	Bacteriological % of first class samples (M.P.N. of coliforms none in 100 ml.)	
												P.T.H.	M.O.						11 A.M.	4 P.M.
January	21	C & C	3.9	26.0	8.4	5.2	Nil	0.040	Nil	Tr.	0.089	Nil	12.2	8.1	Nil	Nil	1.6	415	100	90
February	23	C & C	4.1	27.8	8.8	5.4	0.021	0.036	Nil	Nil	0.117	Nil	12.7	7.9	Tr.	Nil	1.9	425	74	100
March	25	C & C	3.2	28.6	8.8	5.6	0.003	0.040	Nil	Tr.	0.118	Nil	13.1	8.1	Tr.	0.001	1.7	440	92	96
April	23	C & C	3.3	31.0	8.9	5.8	0.015	0.044	Nil	Tr.	0.129	0.3	13.4	8.1	Tr.	0.001	1.8	450	74	59
May	23	C & C	5.1	30.4	8.8	6.2	0.008	0.044	Tr.	Tr.	0.113	0.3	14.0	8.1	0.01	0.001	2.1	470	74	75
June	24	C & C	4.2	31.8	9.2	6.7	0.005	0.045	Tr.	Tr.	0.136	0.5	14.8	8.1	0.01	Nil	2.2	510	71	78
July	26	C & C	7.8	32.6	9.4	7.1	0.006	0.054	Tr.	Nil	0.158	Nil	15.7	8.1	0.01	0.001	2.1	520	50	44
August	24	W	9.3	33.6	9.0	7.3	0.015	0.044	Pr.	Nil	0.229	Nil	15.8	8.1	0.01	0.001	2.0	535	63	66
September	24	W	8.1	32.3	8.2	7.1	0.011	0.040	Tr.	Nil	0.240	Nil	16.1	8.1	0.01	0.001	1.9	520	46	61
October	22	C	8.0	32.0	8.4	6.7	0.016	0.035	Tr.	Tr.	0.253	Nil	15.6	8.0	0.01	0.001	1.9	510	95	100
November	23	C & C	8.2	29.6	8.5	5.9	0.014	0.040	Tr.	Nil	0.180	Nil	14.4	8.0	0.01	0.001	1.9	445	100	100
December	26	C & C	7.1	25.0	8.0	5.0	0.003	0.044	Nil	Nil	0.141	Nil	12.4	7.9	0.01	0.001	1.8	375	100	100

STATEMENT No. X

STATEMENT No. X

WATER ANALYSIS

Chemical data for Mechanical Filters—For 1964

Months	Quantity of water filtered in million gallons per day			Dose of Alum in grains/ gallon			Dose of Chlorine in p.p.m.			Dose of Lime in p.p.m.		
	Max.	Min	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean
January ..	10.080	9.188	9.533	4.0	4.0	4.0	1.5	1.4	1.5	1.5	1.5	1.5
February ..	10.146	9.205	9.508	4.0	4.0	4.0	1.5	1.3	1.43	1.5	1.5	1.5
March ..	9.886	9.312	9.582	4.0	4.0	4.0	1.5	1.5	1.5	1.5	1.5	1.5
April ..	10.263	9.270	9.814	4.0	4.0	4.0	1.5	1.5	1.5	1.5	1.5	1.5
May ..	9.960	9.230	9.705	4.0	4.0	4.0	1.5	1.2	1.44	1.5	1.5	1.5
June ..	9.626	8.993	9.312	4.0	4.0	4.0	1.5	1.3	1.49	1.5	1.5	1.5
July ..	9.491	9.037	9.308	4.0	4.0	4.0	1.7	1.0	1.48	1.5	1.5	1.5
August ..	9.480	7.922	9.250	5.0	4.0	4.3	3.0	2.0	2.75	1.5	1.5	1.5
September ..	9.562	9.085	9.357	4.0	4.0	4.0	3.0	2.5	2.78	1.5	1.5	1.5
October ..	9.548	9.248	9.401	4.0	4.0	4.0	3.0	2.5	2.93	1.5	1.5	1.5
November ..	9.747	8.959	9.355	4.0	0.20	3.33	3.0	2.2	2.89	1.5	1.0	1.33
December ..	9.494	9.450	6.373	3.0	2.0	2.58	3.0	2.2	2.77	1.0	1.0	1.0

STATEMENT No. X (a)

Furnished by Water Works Department

Quantity of alum used in M. Tons and Cost			Quantity of Chlorines used in M. Tons and Cost			Quantity of lime used and cost			Total Cost of Chemical used	
Tons.	Rs.	P.	K.G.	Rs.	P.	M. Tons.	Rs.	P.	Rs.	P.
80.60	22,971	..	2,235	1,452	75	14.85	3,163	05	27,586	80
75.40	21,489	..	1,978	1,285	70	25.30	5,388	90	28,163	60
80.60	22,971	..	2,198	1,428	70	29.45	6,252	85	30,652	55
78.00	22,230	..	2,160	1,404	..	28.50	6,060	50	29,694	50
80.60	22,971	..	2,179	1,416	35	29.45	6,252	85	30,640	20
78.00	22,230	..	2,121	1,378	65	28.50	6,060	50	30,679	15
80.60	22,971	..	2,219	1,452	35	29.45	6,252	85	30,676	20
92.60	26,491	..	4,498	2,923	70	29.45	6,252	85	35,667	55
78.00	22,230	..	4,058	2,637	70	28.50	6,060	50	30,928	20
80.60	22,971	..	4,336	2,828	40	29.45	6,252	85	32,052	25
65.00	18,525	..	4,084	2,654	60	25.00	5,325	..	26,504	60
32-70	9,319	50	27,115	1,761	48	12.60	2,683	80	13,764	28
							Total	..	3,47,009	88

WATER ANALYSIS

STATEMENT No. XI

Salient Physical, Chemical and Bacteriological data for samples collected from High Pressure areas of the City distribution system—1964.

(Results expressed in parts per 100,000)

Months	No. of samples	Smell	Total solids.	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrite	Nitrate	Oxygen absorbed (Tidy)	Iron	pH.	Bacteriological class samples of first % of first (M.P.N. coliforms none in 100 ml.)
January	4	Nil	28.0	7.8	5.4	Nil	0.040	Nil	Tr.	0.097	Tr.	8.0	100
February	8	Nil	28.3	8.6	5.6	0.002	0.040	Nil	Nil	0.118	Tr.	8.1	88
March	20	Nil	29.2	8.8	5.8	Nil	0.040	Tr.	Nil	0.105	Tr.	8.0	80
April	19	Nil	31.0	8.9	6.0	0.003	0.048	Nil	Tr.	0.131	0.01	8.3	53
May	5	Nil	32.0	9.0	6.1	0.002	0.048	Pr.	Tr.	0.113	Tr.	8.1	100
June	Pl.	Nil	33.0	9.4	6.9	0.002	0.040	Tr.	Tr.	0.145	0.01	8.1	46
July	Pl.	Nil	33.4	9.5	7.2	Nil	0.002	Pr.	Tr.	0.177	0.01	8.1	46
August	Pl	Nil	36.0	9.0	7.4	0.008	0.040	Int.	Nil	0.235	0.01	8.1	100
September	8	Nil	36.0	8.6	7.0	0.008	0.048	Pr.	Nil	0.208	0.01	8.0	25
October	11	Nil	33.0	8.3	6.7	0.003	0.040	Pr.	Tr.	0.180	Tr.	8.0	55
November	16	Nil	32.0	8.3	6.1	0.004	0.048	Tr.	Tr.	0.142	0.01	8.1	44
December	12	Nil	26.4	7.7	5.0	0.002	0.048	Nil	Nil	0.110	0.01	8.0	83

Salient Physical, Chemical and Bacteriological data for samples collected from Low Pressure areas of the City Distribution System—1964

(Results expressed in parts per 100,000)

Months	No. of samples	Smell	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Aluminoid Nitrogen	Nitrite	Nitrate	Oxy. absorbed (Tidy)	Iron	pH.	Bacteriological % of first class samples (M.P.N. of 100 ml.)
January	40	Nil	26.8	8.4	5.4	0.002	0.040	Nil	Tr.	0.096	Tr.	8.0	52
February	15	Nil	28.0	8.5	5.4	0.005	0.040	Tr.	Tr.	0.121	Tr.	8.1	40
March	89	Nil	29.6	8.8	5.7	Nil	0.040	Tr.	Tr.	0.105	Tr.	8.0	54
April	52	Nil	32.0	8.7	6.0	0.003	0.040	Nil	Tr.	0.144	Tr.	8.1	44
May	14	Nil	32.4	8.4	6.1	0.002	0.042	Pr.	Tr.	0.111	Tr.	8.1	36
June	24	Nil	33.6	9.4	6.9	0.002	0.008	Tr.	Nil	0.129	0.01	8.2	21
July	23	Nil	34.6	9.6	7.1	0.002	0.002	Pr.	Tr.	0.163	0.01	8.1	9
August	4	H ₂ s	36.0	9.4	7.4	0.002	0.040	Tr.	Tr.	0.216	0.01	8.0	75
September	38	Nil	36.0	8.7	7.3	0.011	0.044	Pr.	Tr.	0.214	0.01	7.8	37
October	46	Nil	34.0	8.6	6.7	0.003	0.040	Pr.	Nil	0.177	0.01	7.9	59
November	42	Nil	30.6	8.2	6.1	0.002	0.040	Tr.	Tr.	0.144	0.02	7.9	29
December	37	Nil	27.8	8.0	5.0	0.003	0.040	Nil	Nil	0.139	0.01	7.9	46

WATER ANALYSIS

STATEMENT No. XIII

Salient Physical, Chemical and Bacteriological data for samples collected from Booster areas of the City Distribution System—1964

(Results expressed in parts per 100,000)

Months	No. of samples	Smell	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrite	Nitrate	Oxy. absorbed (Tidy)	Iron	pH	% of first class samples (M.P.N. of coliforms none in 100 ml.)
January	14	Nil	27.0	8.5	5.3	0.003	0.040	Tr.	Tr.	0.086	0.018	8.0	71
February	14	Nil	28.8	8.6	5.3	0.002	0.040	Tr.	Tr.	0.121	Tr.	8.1	71
March	14	Nil	29.0	8.5	5.7	0.003	0.048	Nil	Tr.	0.081	Tr.	8.0	57
April	12	Nil	31.4	8.7	6.0	0.003	0.040	Nil	Tr.	0.126	Tr.	8.1	42
May	4	Nil	33.0	8.8	6.4	0.004	0.048	Tr.	Tr.	0.115	Tr.	8.1	100
June	10	Nil	34.0	10.0	6.6	0.002	00.04	Tr.	Tr.	0.131	0.01	8.1	10
July	12	Nil	33.6	9.5	7.2	0.002	0.028	Pr.	Tr.	0.154	1.015	8.1	17
August	8	H ₂ S	35.0	9.2	7.3	0.010	0.048	Tr.	Tr.	0.220	0.01	8.1	75
September	15	Nil	35.0	8.6	7.1	0.008	0.040	Tr.	Tr.	0.171	0.015	7.7	47
October	11	Nil	33.8	8.4	6.4	0.004	0.040	Int.	Pr.	0.183	Tr.	7.8	36
November	20	Nil	30.0	8.2	5.8	0.003	0.030	Nil	Tr.	0.135	0.02	7.9	40
December	14	Nil	28.0	7.7	5.0	0.002	0.040	Nil	Nil	0.145	0.01	7.9	28

Salient Chemical and Bacteriological data for water samples collected from the Infiltration Gallery well at Sembiam—1964

H.R.—54

(Results expressed in per 100,000)

Months	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrate	Nitrite	Oxy. absorbed (Tidy)	Alkalinity to		pH	Iron	Phosphates	Silicates	Sp. conductance (micromhos/cm.)	M.P.N. of coliforms in 100 ml.
									P.T.H.	M.O.						
January	50.4	15.0	9.0	Nil	Nil	Nil	Tr.	0.010	Nil	12.0	7.1	0.06	0.06	3.0	740	0
February	49.0	16.0	19.0	0.002	0.004	Nil	Nil	0.019	Nil	12.2	7.1	0.10	0.002	4.0	715	0
March	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
April	52.0	19.0	20.0	0.002	0.004	Nil	Tr.	0.016	Nil	13.0	7.2	0.08	0.004	5.0	765	0
May	64.0	21.0	26.0	0.002	0.002	Nil	Tr.	0.052	..	..	7.1	0.04	..	6.0	945	0
June	65.0	21.0	27.0	0.002	0.002	Tr.	Tr.	0.022	Nil	15.0	7.2	0.04	..	..	1,025	0
July	66.0	22.0	27.0	0.002	0.002	Tr.	Pr.	0.016	Nil	15.4	7.2	0.06	0.01	5.0	1,020	0
August	78.0	26.0	33.0	0.004	0.002	Pr.	Tr.	0.036	..	..	7.9	0.04	..	..	1,225	0
September	76.0	23.0	38.0	0.002	0.005	Nil	Nil	0.036	Nil	15.6	7.1	0.03	..	..	1,025	0
October	70.0	22.0	29.0	0.002	0.003	Tr.	Tr.	0.038	Nil	14.6	7.1	0.15	0.01	6.0	1,075	0
November	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
December	42.0	17.0	14.0	0.003	0.004	Nil	Nil	0.031	Nil	10.4	7.1	0.04	0.003	4.0	615	0

Salient Chemical and Bacteriological data for water samples collected from the Infiltration Gallery well at Saidapet—1964,

(Results expressed in parts per 100,000)

Months	Total solids	Total hardness	Chlorides	Ammoniacal Nitrogen	Albuminoid Nitrogen	Nitrite	Nitrate	Oxy. absorbed (Tidy)	Alkalinity to		pH.	Iron	Phosphates	Silicates	Sp. conductance (micro mhos/cm.)	M.P.N. of coliforms in 100 ml.
									Phenolphthalein	Methyl orange						
January	64.0	25.0	24.0	Nil	0.002	Nil	Pr.	0.053	Nil	18.8	7.3	0.01	0.01	4.0	945	0
February	65.0	26.0	24.0	Nil	Nil	Nil	Pr.	0.012	Nil	18.8	7.0	0.02	0.01	4.0	1,010	0
March	68.0	25.0	26.0	0.002	0.004	Tr.	Nil	0.016	Nil	20.0	7.4	0.01	0.01	8.0	1,025	0
April	73.0	26.0	30.0	0.002	0.002	Tr.	Pr.	0.016	Nil	21.0	7.2	0.015	0.01	8.0	1,075	Infinite
May	77.0	26.0	28.0	0.002	0.003	Tr.	Pr.	0.016	..	..	7.6	0.02	..	6.0	1,125	2.2
June	61.0	26.0	26.0	0.002	0.003	Nil	Int.	0.019	Nil	20.8	7.5	0.02	0.02	6.0	1,125	0
July	72.0	26.0	26.0	0.002	0.002	Pr.	Pr.	0.034	Nil	18.8	7.3	0.01	..	..	1,110	0
August	73.0	26.0	27.0	0.002	0.003	Pr.	Pr.	0.020	..	..	7.8	Tr.	..	..	1,075	0
September	80.0	26.0	28.0	0.002	0.003	Pr.	Pr.	0.016	Nil	20.4	7.8	0.01	..	..	1,225	0
October	65.0	26.0	30.0	0.002	0.003	Nil	Pr.	0.016	Nli	19.0	7.6	0.01	0.01	5.0	1,025	0
November	56.8	25.0	19.0	0.003	0.002	Nil	Pr.	0.039	Nil	17.6	7.3	0.01	0.03	4.0	815	0
December	56.0	26.0	19.0	0.002	0.004	Nil	Nil	0.008	Nil	17.0	7.2	0.01	0.02	3.0	820	0

Infiltration Gallery wells—Distribution system—Results of Chemical and Bacteriological Examination—1964
(Results expressed in parts per 100,000)

Months	Sembiam												Saidapet											
	No. of samples	Total solids	Total hardness	Chlorides	Amm.-N.	Alb.-N.	Nitrous.-N.	Nitric.-N.	Oxy. absorbed (Tidy)	Iron	pH.	% first class sam- ples (M.P.N. of coliforms none in 100 ml.)	No. of samples	Total solids	Total hardness	Chlorides	Amm.-N.	Alb.-N.	Nitrous.-N.	Nitric.-N.	Oxy. absorbed (Tidy)	Iron	pH.	% first class sam- ples (M.P.N. of coliforms none in 100 ml.)
January	7	40.3	11.3	11.4	Nil	0.020	Nil	Tr.	0.062	0.017	7.7	100	6	44.0	13.0	11.2	Nil	0.005	Nil	Tr.	0.085	Tr.	7.9	17
February	7	42.0	12.6	13.5	0.002	0.020	Nil	Nil	0.086	0.04	7.8	100	7	48.8	16.8	11.6	Nil	0.007	Nil	Tr.	0.070	0.01	7.9	86
March	8	41.0	13.4	13.3	0.002	0.022	Nil	Tr.	0.075	0.015	7.6	8.8	7	47.2	21.6	12.3	0.002	0.016	Tr.	Tr.	0.051	Tr.	8.1	86
April	7	43.8	16.4	18.3	0.002	0.016	Nil	Nil	0.040	0.04	7.7	100	6	50.0	18.0	18.3	0.002	0.019	Pr.	Pr.	0.046	Tr.	8.1	0
May	9	55.0	16.2	18.7	0.003	0.025	Tr.	Tr.	0.039	0.03	8.0	67	6	44.6	13.4	18.2	0.003	0.025	Tr.	Tr.	0.111	0.015	8.2	83
June	5	51.0	18.9	19.5	0.005	0.014	Tr.	Nil	0.110	0.01	7.6	100	7	53.0	17.4	17.0	0.003	0.035	Nil	Int	0.081	0.01	8.0	71
July	8	56.9	14.6	14.8	0.008	0.036	Tr.	Tr.	0.041	0.035	7.8	100	8	52.6	15.3	14.5	0.002	0.004	Pr.	Pr.	0.134	0.01	8.0	62
August	10	60.6	18.4	22.2	0.003	0.022	Tr.	Tr.	0.125	0.015	7.8	80	10	54.0	17.5	17.7	0.004	0.025	Pr.	Tr.	0.110	0.01	7.9	70
September	7	57.0	17.3	20.6	0.008	0.034	Pr.	Nil	0.169	0.01	7.8	71	2	58.0	17.3	17.8	0.004	0.040	Tr.	Tr.	0.171	0.015	7.7	50
October	9	53.6	14.9	17.6	0.009	0.022	Pr.	Tr.	0.163	0.018	7.8	100	5	53.0	19.2	19.7	0.003	0.013	Tr.	Pr.	0.076	Tr.	7.8	40
November	10	37.5	9.9	10.1	0.004	0.030	Tr.	Tr.	0.144	0.02	7.8	70	11	44.6	18.6	16.4	0.003	0.027	Nil	Nil	0.10	0.01	7.8	27
December	7	35.0	13.9	12.2	0.002	0.014	Tr.	Nil	0.064	0.01	7.4	71	8	42.6	15.4	13.1	0.003	0.026	Tr.	Nil	0.109	0.01	7.8	37

Statement showing the variation in the concentration of the chemical constituents of water samples collected from the shallow wells, and as sources of water supply in certain outlying ares. (Results expressed in parts per 100,000)

Location of wells	Total solids	Total hardness	Chlorides	Oxy. absorbed (Tidy)	Alkalinity to		P.H.	Iron	Sp. conductance (micro mhos/cm.)	Bacteriological % of first class sam- ples (M.P.N. of 100 ml.)
					Phenolphthalein	Methyl orange				
Eastern well, Adyar ..	13.0-18.4	5.2-7.6	1.7-2.5	0.015-0.075	Nil	7.4-10.09	7.5-8.3	0.01-0.04	185-255	25
Western well, Adyar ..	40-56	9.6-20.0	7.5-14.0	0.016-0.089	Nil	19.0-23.6	7.5-8.1	Nil-0.02	615-820	33
United India Colony, Kodambakkam ..	220-280	60-76	93-120	0.015-0.130	Nil	53.6-60.8	6.9-7.3	0.01-0.3	3170-4100	42
Ganapathy Colony, Guindy ..	105-150	56-78	36-52	0.015-0.070	Nil to 2.5	20.2-26.4	7.2-8.1	Nil-0.01	1025-1840	0
Opp. Sunkuvar Street, Marina ..	26-71	12.0-24.8	10-28	0.010-0.165	-0.5 to 0.8	9.0-14.8	7.9-8.2	Tr-0.015	320-1050	8
Opp. Wenlock Park, Marina ..	19.0-42.0	6.7-18.0	3.8-13.0	0.016-0.080	-0.5 to 0.5	7.4-12.1	8.0-8.3	Nil-0.01	250-585	16
Chellapillayar Koil St., Triplicane ..	66-110	28-36	20-29	0.010-0.070	-3.0 to 0.8	22.4-30.8	7.3-8.3	Tr-0.02	1025-1535	75
Nagappier Street, Tri- plicane ..	50-70	17.2-24	13.6-20	0.008-0.120	-2.0 to 1.2	22.8-25	7.3-8.1	Tr-0.015	725-1075	25
Kottur, Adyar ..	78-180	26-58	27-72	0.016-0.083	Nil to -3.5	18.2-28.2	6.9-8.3	Tr. -0.015	1150-2760	58
Cherian Nagar Division ..	28-84	13-28	4.8-21	0.040-0.179	-1.4 to 2.5	9.0-23.5	7.4-8.5	Tr. -0.02	355-1225	8
Market Farm Division ..	50.4-110	15-30	14-28	0.030-0.0141	-1.0 to 1.2	10.8-39.6	7.3-8.1	Tr. -0.02	740-1635	16
Solayappan Street, 4th Division ..	60-98	27-39	14-27	0.015-0.114	Nil to 2.5	20.6-25.4	7.2-7.8	Tr. -0.03	1025-1430	42
Puliyur, Kodambakkam. I.D. Hospital ..	84-196	23-53	26-66	0.046-0.172	Nil	25.8-42.0	7.0-7.4	Tr. -0.02	1225-2355	8
Tower Clock T.H.Road Naduvakkarai ..	90-110 63-133 80-150	27-42 28-48 24-45	23-30 23-36 29-59	0.041-0.293 0.052-0.151 0.016-0.016	-4.0 to 1.4 -2.0 to 2.0 Nil to -4.1	22.6-25.6 23-36.6 22.6-33.0	7.1-8.2 7.3-8.5 7.1-7.6	Nil -0.02 Tr. -0.015 0.01-0.8	1375-1600 92-1940 1180-2050	42 92 0

WATER ANALYSIS

STATEMENT No. XVIII

Summarised report on the Sterilisation of Water Mains during the year 1964.

S. No.	Place	Division No.	No. of days worked	Lengths of pipe line sterilised	Total lbs. chlo-rine used	Reasons for Sterilisation of mains,
<i>I Plant No. 1</i>						
1	Kelly's (near Kilpauk Shaft)	.. 52	6	4	36	Routine sterilisation of mains,
2	Anderson Road	.. 44	7	2	42	for eradication of blood worms,
3	Hunters Road	.. 40	18	4	102	} Routine Sterilisation of mains,
4	People's Park	.. 64	13	4	78	
5	Gangadareeswar Koil Street	.. 61	4	2	32	for bacterial infection,
6	New Main leading to Kottur	.. 99	2	10	70	Newly laid main,
7	Perambur Barracks Road	.. 36	3	4	27	} for eradication of leeches,
8	Shenoy Nagar (East)	.. 51	3	2	6	
9	Shenoy Nagar (West)	.. 51	4	2	9	
10	Perambur High Road	.. 35	6	2	28	
11	Chandrayogi Samadi Road	.. 35	2	2	12	
12	Gopalapuram Ist.	.. 57	2	1	2	
13	Gopalapuram Ist.	.. 57	3	1	3	
<i>II Plant No. 2</i>						
1	Md. Usman Road	.. 93	9	2	36	for eradication of worms.
2	Ayothi Kuppam	.. 74	3	1	63	} preventive measure against Cholera.
3	Nadu Kuppam	.. 80	3	1	3	
4	St. George Cathedral Road	.. 81	13	4	117	} Routine Sterilisation of main.
5	Edward Elliots Road	.. 82	20	4	135	
6	Edward Elliots Road	.. 82	8	4	48	
7	Gopal Doss Road	.. 58	5	1	3	} for eradication of Worms.
8	Gopal Doss Road (New spot)	.. 58	4	1	4	
9	Berracha Road	.. 46	5	4	90	
10	Usman Road	.. 93	4	4	4	
11	New Main leading to Kottur	.. 99	2	10	70	
12	Venkatachala Mudaly Street	.. 78	4	2	8	} For eradication of leeches.
13	Poonamallee High Road	.. 52	3	8	36	
14	Spur Tank Road	.. 67	3	2	27	
15	Club Road	.. 67	3	2	18	
16	Brighton Road	.. 32	6	8	54	

Comparative Statement of the Out-Turn of Work in Dispensaries During 1964.

Serial No.	Division No.	Names of the Dispensaries	Year of opening.	Location	Attendance				Minor operations	System of Treatment	
					Old		New				Total
					1963	1964	1963	1964			
1	1	New Washerman-pet	1962	10, Avoor Muthiah Maistry Street.	10,843	27,361	15,137	19,817	25,980	47,178	154 Allopathy
2	2	Royapuram	1924	2/87, Suryanarayana Chetty Street.	30,106	31,768	36,251	36,286	66,357	68,054	522 Do.
3	3	Palmyrahayad	1952	Kalmandapam Road.	26,473	27,198	60,675	67,284	87,148	94,482	152 Do.
4	4	Sanjeevirayanpet	1957	21/22, Kappal Polu Chetty Street.	21,394	17,284	23,920	20,657	45,314	37,941	12 Do.
5	7	Royapuram Siddha.	1944	109, Adam Sahib Street.	33,317	31,281	44,254	44,170	77,571	75,451	37 Siddha
6	11	Seven Wells	1956	1/50, St. Xavier Street.	38,658	44,886	37,117	40,767	75,775	85,653	159 Allopathy
7	14	Harbour	1929	6/7, Adam Street.	20,259	16,814	37,258	34,569	57,517	51,383	218 Do.
8	15	Muthialpet	1955	2, Geil Street.	38,593	51,283	37,577	57,456	76,170	1,08,739	Nil Do.
9	19	Mofuskhan	1923	55, Thatha Muthiappan Street	28,114	25,997	29,456	28,358	57,570	54,355	152 Do.
10	20	Mannady	1938	47, Lingi Chetty Street	13,141	13,215	11,632	11,096	24,773	24,311	41 Do.
11	21	Tondiarpet	1963	Thiruvathiur High Road	19,551	20,417	37,916	51,888	57,467	72,305	Nil Do.
12	23	Washermanpet	1913	85, Thiruvathiur High Road	31,620	22,048	62,977	69,054	94,597	91,102	61 Do.
13	25	Mint	1923	244, Mint Street	28,696	23,053	44,313	58,039	73,009	81,092	36 Do.
14	25	Basin Bridge	1957	50, Basin Bridge Road	29,117	31,076	31,343	35,791	60,460	66,867	38 Do.
15	28	Trevelyan Basin	1919	17, Basin Bridge Road	20,810	34,437	35,758	39,677	56,568	74,114	169 Do.
16	31	Perambur	1928	55, Madhavaram High Road	19,617	14,904	56,818	41,330	76,435	56,234	30 Do.
17	32	Vyasarpady	1929	22, Gantz Road	20,910	15,470	41,157	37,804	62,067	53,274	86 Do.
18	32	Sharma Nagar	1964	Sharma Nagar, Madras-12	Nil	6,650	Nil	11,699	Nil	18,349	Nil Do.
19	33	Pulianthope	1930	55, Pulianthope High Road	31,150	25,701	69,569	65,866	1,00,119	91,567	201 Unani
20	34	Otteri	1958	83, Strahns Road	51,837	83,357	60,465	54,554	1,12,302	1,37,911	Nil Allopathy
21	35	Otteri Siddha	1931	1-B, Bashiam Reddy Ist Street	22,835	22,509	40,885	41,068	63,720	63,577	79 Siddha
22	39	Choolai Siddha	1931	16, Alathur Subramania Achari Street	42,296	39,728	71,344	68,634	1,13,640	1,08,362	53 Do.
23	40	Baliah Naidu	1899	6, Rotler Street	35,257	43,559	82,071	72,927	1,17,328	1,16,496	747 Allopathy
24	41	Sembiam	1946	178, Paper Mills Road	31,699	35,876	40,923	43,643	72,622	79,519	449 Do.
25	45	Ayanavaram	1948	127, Konnur High Road	32,591	31,803	49,729	45,306	82,320	77,109	81 Do.

26	46	Nammalwarpet ..	1960	21-A, Subbaraya Chetty Street 2nd Lane	72,273	52,570	43,437	47,367	1,15,710	99,937	507	Do.
27	48	Kosapet ..	1929	1/7, Chellappa Mudali Street	19,722	25,798	46,899	44,973	66,621	70,771	185	Do.
28	48	Kosapet (New) ..	1961	Satchidanandam Street	14,528	20,112	51,534	46,118	66,062	66,230	Nil	Do.
29	51	Aminjikarai ..	1956	171, Poonamallee High Road	14,007	19,883	42,021	45,134	56,028	65,017	238	Do.
30	53	Chetput ..	1959	241, Mc. Nichols Road	32,272	22,455	42,824	45,195	75,096	67,650	24	Do.
31	55	Nungambakkam.	1923	15, Noor Veerasamy Iyer Street	32,675	36,698	41,319	40,198	73,994	76,896	163	Allopathy
32	56	Thousand Lights ..	1930	43, Model School Road	61,411	52,013	52,167	56,411	1,13,578	1,08,424	96	Ayurvedic
33	59	Puddupakkam ..	1924	369, Pycrafts Road	39,875	42,559	47,543	55,898	87,418	98,467	52	Allopathy
34	61	Kilpauk ..	1919	6, Gangadhareeswarar Koil Street	25,652	30,444	50,123	50,333	75,775	80,777	220	Do.
35	63	Ripon Buildings ..	1962	Ripon Buildings	11,506	22,755	15,532	29,432	27,038	52,187	175	Do.
36	66	Chintadripet ..	1909	2/61, Arunachala Naicken Koil Street	34,173	31,030	48,989	52,276	83,162	83,306	127	Do.
37	67	Egmore ..	1923	34, Poorala Gengu Reddy Street	35,743	16,634	25,462	15,059	61,205	31,693	38	Do.
38	69	Pudupet ..	1939	83, Harris Road	31,560	35,230	50,933	48,855	82,493	84,085	30	Do.
39	71	Thirvatteswaran-pet ..	1932	42, Thayar Sahib Street	71,817	75,152	37,088	39,606	1,08,905	1,14,758	218	Unani
40	72	Chepauk ..	1955	8, Khana Baugh Street	36,979	37,340	37,245	41,599	74,224	78,939	42	Allopathy
41	75	Triplacane ..	1918	25, Pycrafts Road	67,695	58,287	41,941	39,438	1,09,636	97,725	298	Allopathy
42	77	Zambazaar ..	1956	21, Gazette Begum Street	41,845	54,088	39,075	36,874	80,920	90,962	69	Do.
43	80	Krishnampet ..	1938	25, Dr. Natesan Road	34,437	62,805	23,837	25,242	58,274	88,047	305	Do.
44	81	Teynampet (North) ..	1963	56-C, Muthaiya Mudali Street	23,164	22,274	19,663	19,259	42,827	41,533	46	Do.
45	84	Mylapore (North) ..	1959	8, Karneeswarar Pagoda Street	47,684	31,745	30,641	31,627	78,325	63,372	15	Do.
46	85	Mylapore (South) ..	1924	101, Kutcheri Road	55,096	54,930	38,883	35,435	93,979	90,365	302	Do.
47	88	Teynampet (South) ..	1927	104, Mount Road	15,997	15,374	26,575	26,939	42,572	42,313	16	Do.
48	89	Adayar ..	1948	13, Greenways Road	25,044	28,316	26,131	31,774	51,175	60,090	Nil	Do.
49	92	Kodambakkam ..	1948	107, Arcot Road	10,092	28,806	26,305	37,375	36,397	66,181	11	Do.
50	93	T. Nagar (North) ..	1956	4, Dr. Sadasivam Road	19,041	20,335	20,411	21,372	39,452	41,707	48	Do.
51	94	T. Nagar (South) ..	1922	3, Sivagnanam Road	24,939	32,471	29,265	34,669	55,204	67,140	70	Do.
52	97	Saidapet ..	1956	51, Sadarappan Mudali Street	28,267	41,237	37,801	29,229	66,068	70,466	18	Do.
53	99	Guindy ..	1957	1-A, Sathani Street	28,534	22,898	10,600	11,897	39,134	34,795	Nil	Do.
Total ..					16,34,912	17,31,934	20,62,789	21,37,324	36,97,701	38,69,258		

Years	1964		1959		1960		1961		1962		1963	
	Number of samples analysed	Number of adulterated samples	Number of samples analysed	Percentage of adulterated samples	Number of samples analysed	Percentage of adulterated samples	Number of samples analysed	Percentage of adulterated samples	Number of samples analysed	Percentage of adulterated samples	Number of samples analysed	Percentage of adulterated samples
Milk ..	4,421	1,491	4,496	42.2	4,642	43.2	3,793	38.5	4,446	35.5	4,260	35.6
Butter ..	526	64	567	16.2	583	16.5	553	11.8	609	11.3	592	11.8
Ghee ..	865	23	854	7.7	892	8.6	672	6.8	810	7.5	950	3.2
Gingelly Oil ..	845	67	1,140	9.3	1,143	8.7	988	7.3	911	15.7	790	6.1
Groundnut Oil ..	229	13	109	4.6	143	16.8	169	7.4	307	7.5	227	8.4
Cocoanut Oil ..	277	3	273	2.9	385	2.6	354	1.4	350	1.4	321	1.2
Coffee Powder ..	214	48	452	8.0	286	7.7	265	6.8	255	4.3	230	10.9
Tea ..	112	5	63	7.9	102	8.9	71	8.5	162	4.3	107	9.3
Ghee Substitutes	8	..	3	33.3	4	25.0	90	0.0	29	10.3	5	..
Other articles ..	*243	**88	166	26.8	197	33.5	208	31.3	249	33.7	187	24.0
Total ..	7,740	1,802	8,123	27.8	8,377	28.7	7,163	24.4	8,128	24.4	7,669	23.2

*Thoor Dhall-101; Masur Dhall-2; Bengalgram flour-2; Wheat Samba-2; Ravai-2; Wheat Atta-2; Maida flour-19; Sago-1; Arrowroot-3;
 ** —18; " —1; " —0; " —1; " —0; " —0; " —1;
 *Turmeric-54; Chilli Powder-9; Dhanial Powder-1; Mixture of Chillies and Dhanial powder-3; Sambar Powder-1; Curry powder-1; Asafoetida-3;
 ** —19; " —9; " —1; " —3; " —1; " —0;
 * Bura Sugar-1; Brown Sugar-2; White sugar-3; Jaggery-3; Honey-2; Confectionery & Sweets-7; Aerated Water-8; Ice Cream-5;
 ** —0; " —2; " —0; " —5; " —8;
 *Fruit Products-3; Food colours-4;
 ** —3; " —4;

Nature of samples	Adulterated samples among the samples analysed in 1964						Adulterated samples of the previous years pending disposal on 1-1-1964						Total number of adulterated samples dealt with during 1964						Average fine per conviction in 1963		Average fine per conviction in 1964	
	Number of samples	Number of convictions	Number of articles seized and forfeited or destroyed without prosecution	Number acquitted, warned, admonished or withdrawn	Number not prosecuted	Number pending disposal on 31st December 1964	Number of samples	Number of convictions	Number of articles seized and forfeited or destroyed without prosecution	Number acquitted, warned, admonished or withdrawn	Number not prosecuted	Number pending disposal on 31st December, 1964	Number of samples	Number of convictions	Number of articles seized and forfeited or destroyed without prosecution	Number acquitted, warned, admonished or withdrawn	Number not prosecuted	Number pending disposal on 31st December, 1964	Total fines imposed in 1964	Number of convictions in 1963	Total fines imposed in 1963	Average fine per conviction in 1963
Milk	1,491	732	..	5	104	650	5,029	418	..	419	..	4,192	6,520	1,150*	..	424	104	4,842	Rs.	1,326	Rs.	53
Butter	64	25	..	1	18	20	148	18	..	28	..	102	212	43†	..	29	18	122	53	51	71,839-50	54
Ghee	23	7	..	1	9	6	232	7	..	74	..	151	255	14	..	75	9	157	40	34	3,165-00	62
Gingelly Oil	67	35	..	..	17	15	127	4	..	7	..	116	194	39	..	7	17	131	92	85	6,356-00	187
Groundnut Oil	13	6	..	1	5	1	22	3	..	..	..	19	35	9	..	1	5	20	43	17	3,335-00	39
Cocoonut Oil	3	1	..	..	2	..	5	..	..	..	..	5	8	1	..	..	2	5	80	7	705-00	41
Coffee Powder	48	21	..	1	13	13	63	11	..	11	..	41	111	32	..	12	13	54	50	10	260-00	37
Tea	5	3	..	..	2	..	16	..	..	..	..	16	21	3	..	..	2	16	115	10	645-00	65
Ghee Substitutes	..	..	..	..	..	..	6	..	..	..	..	6	6	..	..	..	..	..	33	10	445-00	45
Other articles	88	48	..	1	19	20	59	16	..	4	..	39	147	64	..	5	19	59	47	64	2,125-00	33
Total	1,802	878	..	10	189	725	5,707	477	..	543	..	4,687	7,509	1,355	..	553	189	5,412	54	1,604	88,875-50	55

* One cases convicted with fines as well as Rigorous imprisonment for one year; 3 cases convicted with fines as well as imprisonment till the rising of the Court.

† Three cases convicted with fines as well as imprisonment till the rising of the Court.

FOOD ANALYSIS

Circles Divisions		I & II (1-20)						III & IV (21-40)							
		A. Range						B. Range							
Nature of articles		Food Inspector		Sanitary Inspectors I Circle		Sanitary Inspectors II Circle		Food Inspector		Sanitary Inspectors III Circle		Sanitary Inspectors IV Circle		Food Inspector	
		Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated
Milk	..	638	303	174	46	162	63	586	240	195	65	117	27	679	183
Ghee and Ghee Substitutes	..	111	3	27	1	37	1	98	5	40	1	26	..	106	2
Butter	..	74	7	..	..	20	2	13	2	8	2	1	1	85	5
Edible Oils	..	117	14	81	3	90	4	116	4	72	6	79	3	108	9
Coffee	..	47	9	..	..	..	..	29	7	..	..	..	..	36	8
Tea	..	32	2	..	..	..	..	5	1	..	..	..	..	10	..
Other articles	..	34	10	..	..	..	..	23	4	1	..	2	..	81	34
Total	..	1,053	348	282	50	309	70	870	263	316	74	225	31	1,105	243

STATEMENT No. III

V & VI (41-60)						VII & VIII (61-80)						IX & X (81-100)						Total	
C. Range						D. Range						E. Range						Taken	Adulterated
Sanitary Inspectors V Circle		Sanitary Inspectors VI Circle		Food Inspector		Sanitary Inspectors VII Circle		Sanitary Inspectors VIII Circle		Food Inspector		Sanitary Inspectors IX Circle		Sanitary Inspectors X Circle					
Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated	Number of samples taken	Adulterated				
80	21	108	24	541	148	126	47	118	29	618	207	149	61	130	52	4,421	1,491		
17	1	19	..	133	2	30	..	34	2	136	3	25	1	34	1	873	23		
6	..	9	2	78	4	22	3	27	2	130	21	24	6	29	7	526	64		
62	4	68	5	147	7	58	..	70	2	154	14	64	..	65	8	1,351	83		
..	..	..	..	49	10	..	..	..	..	50	14	1	..	2	..	214	84
..	..	..	..	34	2	..	..	..	..	31	..	..	..	..	..	112	5
3	2	4	1	41	12	..	..	..	..	51	24	2	1	1	..	243	88
168	28	208	32	1,023	185	236	50	249	35	1,170	283	265	69	261	41	7,740	1,802		

CHILD WELFARE SCHEME

STATISTICS STATEMENT No. 1

Statement showing the number of cases of labour which came under the care and observation of Child Welfare Scheme during 1964

Centre	How conducted					Caste			Remarks			
	By Nurses of C.W.S.	Taken to Hospitals.	Taken over after conducted by barber-Women.	Maternity ward.	Total.	Hindus.	Christians.	Muslims.	Twins.	Triples.	Still Births.	Macerated.
1. New Washermanpet	156	68	19	851	1,094	956	52	86	5	..	8	11
2. Grace Garden ..	220	11	4	..	235	11	1	118	2	..	4	1
3. Sanjeevirayanpet ..	165	94	6	759	1,024	939	14	71	5	..	2	7
4. Royapuram ..	172	10	4	..	186	108	5	73	1	..	2	1
5. Ammen Koil (South)	241	60	6	767	1,074	829	52	193	10	..	11	5
6. Muthialpet ..	231	7	7	..	245	117	..	128	2	..	..	..
7. Seven Wells (South)	160	54	5	622	841	734	19	88	10	..	16	6
8. Dr. V.R. Nagar ..	448	144	37	1,194	1,823	1,396	16	411	20	1	21	11
9. Kondithope ..	213	12	5	7	237	183	9	45	3	..	3	8
10. Peddunaickenpet ..	89	8	1	..	98	97	..	1	1	..	4	1
11. Trevelyan Basin ..	91	44	2	788	925	916	7	2	5	..	6	4
12. Elephant Gate ..	21	13	2	109	145	142	1	2	2	..	3	..
13. Perambur ..	206	68	23	596	893	867	18	8	8	..	14	4
14. Pullianthope ..	474	104	31	1,376	1,985	1,498	68	419	14	..	30	6
15. Thiruvika Nagar ..	252	21	2	..	275	169	2	104	1	..	3	3
16. Choolai Maty. Home	208	234	7	1,209	1,658	1,589	37	32	17	..	7	9
17. Hospital Maiden ..	90	5	1	..	96	93	..	3	1	..	1	..
18. Agaram ..	23	..	..	10	33	31	1	1	..	..	1	..
19. Sembiam ..	321	67	11	667	1,066	913	44	109	4	1	7	11
20. Ayanavarape ..	203	36	20	1,039	1,298	1,177	67	54	12	..	9	14
21. Nammalwar ..	161	9	6	..	176	173	3	..	2	..	2	..
22. Otteri ..	178	7	13	..	198	178	7	13	1	..	..	2
23. Perumalpet ..	25	81	1	937	1,044	955	71	18	8	..	12	8
24. Purasawalkam ..	101	40	2	695	838	753	62	23	5	..	8	8
25. Kilpauk ..	141	22	7	300	470	409	17	43	2	..	5	3
26. Chetpet ..	81	38	10	339	468	422	34	12	4	..	7	..
27. Nungambakkam ..	149	7	6	..	162	154	6	2	1	..	3	..
28. Thousand Lights ..	155	11	3	..	169	120	10	39	1	..	1	5
29. Pudupakkam ..	316	50	4	612	982	597	12	373	3	1	4	6
30. Park Town ..	24	1	1	..	26	25	1	..	..	..	..	..
31. Ashok Vihar ..	77	37	3	719	836	685	63	88	5	..	7	3
32. Chintadripet ..	202	10	4	..	216	177	2	37	..	..	3	5
33. Pudupet ..	177	10	4	..	191	93	6	92	1	..	1	1
34. Mirsahibpet and Zambazzar ..	315	15	2	..	332	136	1	195	2	..	3	6
35. Royapettah ..	241	19	3	..	263	226	6	31	2	..	2	1
36. Teynampet ..	288	9	3	..	300	294	3	3	2	..	3	3
37. Karneeswarapuram.	390	20	15	..	425	344	10	71	3	1	8	5
38. R.A. Puram ..	288	15	1	..	304	297	5	2	2	..	5	4
39. Adyar ..	58	32	2	428	520	492	16	12	5	..	7	6
40. Vadapalani ..	243	82	..	1,523	1,848	1,665	120	63	21	..	10	28
41. T. Nagar (North) ..	118	16	8	..	142	139	..	3	2	..	3	1
42. Sathyamoorthi Nagar ..	123	9	2	..	134	129	..	5	3	..	2	..
43. Saidapet (North) ..	139	10	5	..	154	146	2	6	1	..	42	..
44. Periapet Maty. Home	197	122	1	1,826	2,146	1,994	57	95	15	..	20	32
45. Guindy ..	93	9	..	..	102	100	1	1	1	..	..	2
Total ..	8,264	1,741	299	17,373	27,677	23,573	928	3,175	215	4	271	238

CHILD WELFARE SCHEME

STATISTICS STATEMENT No. 2

Statement showing deaths among cases brought under the care of Child Welfare Scheme during the year 1964.

Sl. No.	Name of the Centre	Deaths among cases brought under the care of C.W.S. but not under treatment			Deaths among cases brought under care and treatment of C.W.S.	Total
		Under Private Doctors	Under Vaidians	In Hospitals		
1	New Washermanpet ..	..	..	3	..	3
2	Grace Garden ..	..	..	..	..	..
3	Sanjeevirayanpet ..	..	..	..	..	..
4	Royapuram ..	..	..	..	..	..
5	Ammen Koil (South) ..	1	..	..	..	1
6	Muthialpet ..	..	..	1	..	1
7	Seven Wells (South) ..	..	..	..	..	..
8	Dr. V.R. Nagar ..	..	..	1	..	1
9	Kondithope ..	..	..	..	..	..
0	Peddunaickenpet ..	..	..	..	..	..
1	Trevelyan Basin ..	..	..	..	1	1
2	Elephant Gate ..	..	..	..	..	..
3	Perambur ..	..	..	1	..	1
4	Pulianthope ..	..	..	1	..	1
5	Thiru-vi-ka Nagar ..	..	..	..	..	..
6	Choolai Maternity Home. ..	..	..	1	..	1
7	Hospital Maidan ..	..	..	..	..	..
8	Agaram ..	..	..	..	..	1
9	Sembiam ..	..	..	..	..	..
0	Ayanavaram ..	..	..	1	..	1
1	Nammalwarpet ..	..	..	..	..	..
2	Otteri ..	..	..	..	..	..
3	Perumalpet ..	..	..	3	..	3
4	Purasawalkam ..	..	..	..	..	..
5	Kilpauk ..	..	..	..	..	..
6	Chetpet ..	..	..	..	..	..
7	Nungambakkam ..	..	..	..	..	..
8	Thousand Lights ..	..	..	..	..	..
9	Pudupakkam ..	..	..	2	..	2
0	Park Town ..	..	..	..	..	..
1	Ashok Vihar ..	..	..	..	..	..
2	Chintadripet ..	..	..	..	..	..
3	Pudupet ..	..	..	1	..	1
4	Zam Bazaar } ..	..	..	..	..	..
5	Mirsahibpet } ..	..	..	..	..	..
6	Royapettah ..	..	..	1	..	1
7	Teynampet ..	..	..	..	..	..
8	Karniswarapuram ..	..	..	..	..	..
9	Raja Annamalaipuram ..	..	..	..	..	..
0	Adyar ..	..	..	..	..	..
1	Vadapalani ..	..	..	1	..	1
2	Theagaraya Nagar ..	..	..	..	..	..
3	Sathyamurthi Nagar ..	..	..	..	..	..
4	Saidapet (North) ..	..	..	1	..	1
5	Periapet Maternity Home. ..	..	..	1	..	1
6	Guindy ..	..	..	..	..	..
Total ..		1	..	19	1	21

CHILD WELFARE SCHEME

Statement showing the number of pre-natal cases registered

Serial number	Centre	Total Number of Mothers whether they had pre-natal case or note before confinement	Booked			
			Booked by Midwives	Booked or their own accord	Total	C.W.S.
1	New Washermanpet	1,371	253	591	844	50
2	Grace Garden	1,071	296	199	495	30
3	Sanjeevirayanpet	2,058	393	470	863	57
4	Royapuram	971	237	150	387	19
5	Muthialpet	892	416	246	662	54
6	Ammen Koil (South)	1,162	460	361	821	59
7	Seven Wells (South)	1,349	578	285	863	57
8	Dr. V.R. Nagar	2,845	863	550	1,413	99
9	Kondithope	1,159	248	571	819	21
10	Peddunaickenpet	669	132	404	536	28
11	Trevelyan Basin	1,626	273	640	913	70
12	Elephant Gate	323	125	89	214	15
13	Perambur	1,924	536	491	1,027	73
14	Pulianthope	2,326	569	1,155	1,724	1,34
15	Thiru-vi-ka Nagar	866	257	484	741	24
16	Choolai Maty. Home	842	921	487	1,408	1,38
17	Hospital Maidan	1,026	344	855	525	29
18	Sembiam	1,576	139	139	994	79
19	Agaram	87	14	21	35	1
20	Ayanavaram	1,543	272	776	1,048	80
21	Nammalwarpet	610	220	270	490	15
22	Perumalpet	668	278	214	492	27
23	Purasawalkam	964	251	319	570	37
25	Otteri	1,925	543	583	1,126	16
25	Kilpauk	984	240	295	535	26
26	Chetpet	1,656	120	508	628	31
27	Nungambakkam	582	242	166	408	16
28	Thousand Lights	533	175	163	338	13
29	Pudupakkam	1,789	431	559	990	71
30	Royapettah	912	306	272	578	20
31	Park Town	240	132	8	140	10
32	Ashok Vihar	1,233	296	307	307	42
33	Chintadripet	826	446	191	637	31
34	Pudupet	671	218	181	399	17
35	Zambazaar	1,113	388	314	702	24
36	Mirsahibpet					
37	Teynampet	1,134	341	451	792	25
38	Karniswarapuram	1,065	392	513	905	40
39	Raja Annamalaipuram	766	362	179	541	27
40	Adyar	471	205	187	392	27
41	Vadapalani	2,655	284	1,490	1,774	1,00
42	Theagaraya Nagar	585	228	172	400	20
43	Sathyamurthi Nagar	628	154	242	396	19
44	Saidapet (North)	1,346	262	774	1,036	56
45	Periapet Maty. Home	1,844	642	857	1,499	1,09
46	Guindy	351	173	115	288	18
		52,237	14,655	18,336	32,991	19,71

and followed up during the year 1964

Cases							Unbooked Cases						
Hospital	Private Doctors	Private Nurses	Un-skilled Attendance	Not tracable	Not confined	Total	C.W.S.	Hospital	Private Doctors	Private Nurses	Un-skilled Attendance	Not tracable	Not confined
166	1	1	29	37	105	527	96	247	..	..	62	80	42
123	..	..	6	11	48	576	155	173	13	..	93	96	46
134	1	1	11	63	77	1,195	344	393	32	..	55	192	179
150	1	..	9	13	24	584	320	156	14	..	37	30	27
14	14	2	12	92	69	230	175	5	8	1	13	28	..
98	6	4	12	34	70	341	141	108	2	8	16	32	34
167	12	3	26	30	53	486	213	147	11	8	18	27	62
194	..	..	54	94	73	1,432	395	746	2	..	140	101	48
494	1	..	8	74	28	340	28	188	2	..	9	84	29
207	6	2	19	3	18	133	48	35	5	4	20	16	5
120	10	..	4	51	27	713	294	98	88	78	27	21	107
29	6	4	2	4	18	109	11	65	4	5	3	18	3
100	..	..	59	51	87	897	673	130	12	15	73	124	70
112	19	20	37	43	153	602	416	61	28	5	32	33	27
180	..	..	8	188	116	125	26	60	..	..	5	12	22
12	1	..	3	6	5	434	252	131	1	1	3	30	16
53	8	2	4	46	120	501	154	52	16	52	50	49	128
55	25	31	18	55	11	582	76	71	44	59	108	187	37
1	..	..	1	..	14	52	2	3	..	..	5	10	32
105	2	2	27	19	87	495	73	184	25	22	81	69	41
110	..	..	5	104	118	120	23	38	..	..	14	20	25
94	7	6	8	37	65	176	12	55	13	..	4	75	17
86	3	4	4	43	56	394	92	125	6	4	8	92	67
50	31	15	14	213	642	799	377	108	27	23	62	178	24
55	25	21	37	72	63	449	154	73	15	18	25	83	81
163	2	..	13	33	104	1,028	112	515	1	1	10	192	197
161	3	..	22	29	29	174	16	72	2	..	23	39	22
165	..	..	3	..	37	195	51	77	1	..	7	22	37
152	4	5	8	30	73	799	200	430	10	5	35	39	80
211	3	4	58	34	62	334	62	150	..	10	7	48	57
7	5	1	11	25	14	630	366	137	13	1	57	47	9
126	1	1	1	6	20	100	76	5	10	..	..	5	4
208	11	9	8	17	66	189	32	114	18	6	4	11	4
198	2	..	3	2	24	272	9	194	..	..	7	55	7
352	..	..	8	13	87	411	88	210	..	..	15	48	50
393	..	..	2	9	130	342	64	206	..	..	6	10	56
389	6	3	13	15	74	160	20	120	2	..	..	10	8
164	2	1	7	14	77	225	25	160	2	3	4	6	25
42	..	1	11	9	54	79	45	15	..	..	4	6	9
261	11	14	103	224	158	881	257	178	1	6	153	157	129
104	..	..	22	27	47	185	99	46	1	..	3	16	20
133	1	2	15	21	34	232	109	69	..	..	2	39	13
285	..	..	14	5	167	310	100	90	..	..	10	8	102
118	2	10	31	101	137	345	171	58	6	20	24	27	29
42	..	2	6	12	44	63	19	28	..	..	3	2	11
6,583	232	177	776	1,926	3,587	19,246	6,271	6,326	435	355	1,347	2,474	2,038

CHILD WELFARE SCHEME

Statement showing Pre-Natal cases registered and ailment

Serial Number	Child Welfare Centre	I			II				III			IV							
		Cardio-Vascular diseases			Respiratory diseases				Alimentary diseases			Toxaemia of Pregnancy							
		V.D.H.	Hypertension	Varicose Venis	Bronchitis	Pneumonia	Pulmonary T.B.	Asthma	Constipation	Dyspepsia	Diarrhoea	Dysentery	Seanty Micturition	Albuminuria	Pyelitis	Pre-exclamptic	Eclampsia	Jaundice	General Anasarea
1	New Washermanpet ..	3	..	2	25	..	..	9	..	5	1	8	6	..	..	13	..	..	..
2	Grace Garden ..	..	..	..	21	..	..	..	11	4	2	6	10	..	..	3	..	..	..
3	Sanjeevirayanpet ..	1	1	..	11	..	..	..	..	4	4	12	..	1	..	14	..	..	..
4	Royapuram ..	..	2	..	13	..	..	1	20	6	..	8	15	1	..	2	..	..	5
5	Muthialpet ..	..	..	..	28	..	..	..	7	76	3	9	10	..	..	..	..	..	..
6	Ammen Koil (South)	3	1	3	45	..	1	..	26	28	1	3	9	1	..	11	..	..	..
7	Seven wells ..	5	3	6	30	..	1	1	31	40	7	8	18	4	..	12	..	..	1
8	Dr. V.R. Nagar ..	..	..	..	11	..	1	15	6	17	2	11	16	13	..	19	..	..	..
9	Kondithope ..	..	1	..	12	..	..	..	5	24	2	4	12	..	..	4	..	..	..
10	Peddunaickenpet ..	1	1	..	14	..	..	..	3	26	3	..	14	5	..	2	..	..	2
11	Trevelyan Basin ..	..	..	1	41	..	..	2	6	4	..	1	13	..	..	12	..	..	1
12	Elephant Gate ..	..	..	1	4	1	..	9	10	9	3	2	5	1	..	10	..	1	..
13	Perambur ..	..	8	3	59	..	..	2	15	38	14	15	39	..	..	8	..	..	28
14	Pulianthope ..	2	..	..	7	..	..	..	..	26	1	10	3	1	..	8	..	..	..
15	Thiru-vi-ka Nagar ..	..	5	1	20	..	..	1	..	67	8	3	8	..	10	..	..	..	..
16	Choolai Maty. Home.	..	..	..	20	..	..	..	..	83	..	..	..	..	..	39	..	..	..
17	Hospital Maidan ..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Sembiam ..	5	1	2	17	..	..	1	2	15	5	..	2	5	1	15	..	..	..
19	Ayanavaram ..	4	..	2	9	..	..	1	..	15	2	4	4	..	1	45	..	..	..
20	Nammalwarpet ..	..	8	11	..	..	..	..	..	37	3	..	14	..	..	9	..	..	..
21	Otteri ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
22	Perumalpet ..	1	..	..	21	2	1	3	2	2	3	3	..	2	..	..	16	..	..
23	Purasawalkam ..	2	13	..	27	..	..	2	26	29	7	5	16	6	..	4	..	..	1
24	Kilpauk ..	..	..	..	3	..	..	..	7	137	..	1	14	..	..	1	..	..	..
25	Chetput ..	6	1	1	23	..	..	1	41	4	2	5	16	..	..	4	..	..	..
26	Nungambakkam ..	1	1	1	13	..	..	14	10	2	4	3	15	..	..	11	..	..	..
27	Thousand Lights ..	..	..	..	2	..	..	1	23	3	5	3	..	..	..	4	..	..	2
28	Pudupakkam ..	2	..	..	..	..	1	1	..	15	..	..	..	..	..	13	..	..	..
29	Durgapuram ..	..	..	..	2	1	..	..	36	9	6	2	3	1	..	9	..	..	..
30	Ashok Vihar ..	1	7	..	..	..	1	1	..	..	..	..	3	1	..	2	..	..	..
31	Park Town ..	..	..	..	7	..	..	..	..	12	..	1	6	..	..	..	..	..	..
32	Chintadripet ..	..	..	..	12	..	1	14	11	10	6	1	13	..	..	12	..	..	..
33	Pudupet ..	2	1	..	5	..	..	2	9	4	1	12	..	..	10	..	1	..	2
34	Zambazaar } ..	..	..	..	35	..	..	..	33	24	6	3	27	..	..	7	..	..	23
35	Mirsahibpet } ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Teynampet ..	..	..	..	4	..	..	..	24	8	1	2	6	..	..	4	..	..	..
37	Karaneeswarapuram.	2	..	..	23	..	2	1	16	89	5	4	4	50	21	14	..	..	..
38	Raja Annamalaipuram	..	..	..	16	..	1	..	6	48	2	5	13	1	8	9	..	..	..
39	Adayar ..	1	6	2	13	2	3	8	26	114	12	6	11	6	..	4	4	..	6
40	Vadapalani ..	..	..	..	5	2	2	..	..	..	2	1	..	..	..	2	..	1	..
41	Thiagaraya Nagar ..	..	..	..	8	..	..	3	4	..	..	2	9	..	..	18	..	..	..
42	Sathyamurthy Nagar.	..	..	..	..	..	..	..	..	..	..	..	4	..	..	9	..	..	..
43	Saidapet (North) ..	2	..	2	4	..	..	..	19	14	1	..	..	..	..	3	..	..	..
44	Periapet Maty. Home.	..	..	..	..	..	1	1	..	13	..	3	..	..	..	20	..	..	..
45	Guindy ..	..	3	..	6	..	1	2	6	7	4	1	6	4	..	4	..	..	..
46	Agaram ..	..	..	..	..	..	..	..	..	..	4	..	..	2	..	..	..	..	..
Total ..		44	63	38	618	8	17	96	441	998	132	167	364	105	52	380	21	2	70

f pregnancy diagnosed and patients advised in 1964.

V Deficiency diseases.			Pyrexia			Debi- lity	Speific dseases.				Other diseases and abnormalities of Pregnancy							
Calcium	Vitamin.	Other Nutri-limal.	Influenta.	Malaria.	Rheumatisms.	General Emaciasion.	Skin diseases.	Ear, Nose and Throat.	Syphilist gonorrhoea.	Leucorrhoea.	Morning Sickness	Anaemia.	Ante-Partum. Haemorrhage.	Breast Aboeess.	Hydraminus.	Normal.	Other diseases.	Total.
..	194	42	5	..	..	10	2	..	15	..	..	249	..	..	..	220	35	844
9	23	5	..	..	..	6	1	..	..	1	..	116	..	..	..	260	17	495
8	132	1	30	..	..	15	6	..	..	..	..	219	..	..	..	377	27	863
6	22	..	..	..	..	5	1	..	..	..	..	80	..	..	..	176	24	367
11	35	..	10	..	..	60	..	..	..	..	..	96	1	..	..	254	62	662
..	91	2	8	..	..	95	4	4	24	4	..	..	..	..	3	197	38	821
4	91	13	1	2	..	40	13	2	5	3	2	178	2	1	..	271	68	863
8	180	1	7	..	..	33	3	..	..	..	..	93	..	..	1	921	55	1,413
..	10	1	..	..	..	2	..	..	..	..	..	141	..	..	..	315	37	571
..	13	1	1	..	..	4	..	..	..	..	..	106	..	..	1	189	18	404
1	18	..	2	..	..	..	..	..	..	..	..	57	..	..	..	751	3	913
..	40	6	2	..	6	6	4	1	..	..	8	54	1	1	2	16	11	214
9	54	19	..	1	..	54	1	..	..	..	..	9	..	..	6	317	246	1,024
36	12	..	2	..	..	8	14	..	48	2	..	766	..	..	2	717	59	1,724
..	57	..	3	..	5	70	3	..	..	5	5	110	..	..	..	17	90	741
3	62	32	..	..	..	..	..	..	3	..	..	533	..	..	..	216	157	1,149
..	..	197	..	..	..	..	..	..	..	..	..	90	..	..	..	237	..	525
14	74	..	2	..	..	3	..	9	..	..	..	40	1	..	..	742	41	994
59	14	..	2	..	..	..	..	20	..	28	2	89	..	..	1	727	19	1,048
..	41	7	..	..	1	..	4	..	1	..	..	70	..	..	..	182	45	490
..	62	7	..	..	..	..	..	..	..	..	..	222	..	..	1	553	..	1,126
..	16	..	4	3	4	6	5	..	8	1	..	61	..	..	1	281	50	496
4	65	..	..	..	..	19	8	..	..	..	..	19	..	..	..	198	127	570
..	59	..	1	..	..	14	..	..	..	..	..	32	..	..	..	198	68	535
..	95	..	5	..	..	80	4	1	2	..	..	18	..	1	2	242	74	628
..	19	..	1	..	1	..	1	..	..	..	..	11	..	..	1	284	3	408
..	19	..	..	..	..	3	3	..	..	..	..	24	..	..	..	198	48	338
..	215	..	1	..	..	596	3	..	..	..	..	46	..	..	..	93	4	990
..	33	..	..	..	..	9	..	..	..	4	..	18	..	..	..	344	99	578
..	33	..	1	..	..	3	3	..	1	..	..	152	..	..	..	344	44	603
..	11	2	4	..	..	17	..	..	..	..	..	26	..	..	..	54	..	140
3	112	40	6	5	0	28	..	..	9	12	..	203	3	2	4	62	37	637
21	1	..	..	..	..	13	3	..	..	2	1	13	..	..	..	294	2	390
..	37	34	..	..	..	3	..	..	..	..	1	125	..	..	1	335	8	702
..	23	..	..	..	..	..	..	2	..	..	..	26	1	..	..	678	10	792
99	100	100	28	..	1	5	7	..	..	1	..	126	..	..	..	91	116	905
50	100	30	12	..	..	8	2	..	2	4	..	83	..	..	1	63	74	541
..	135	..	..	..	12	22	6	..	2	..	8	47	3	..	2	45	..	392
..	319	14	1	..	..	1	7	68	..	..	..	232	..	..	..	438	3	1,774
..	47	3	14	..	..	26	5	1	..	..	..	52	..	1	..	187	26	400
..	70	..	19	..	..	32	7	2	..	..	..	54	..	1	..	152	46	396
..	13	..	..	1	..	1	2	..	..	..	..	13	..	..	..	958	3	1,036
..	55	..	..	..	1	2	..	..	..	11	..	134	..	..	..	1,144	14	1,499
..	75	..	..	..	..	6	..	..	..	..	2	36	..	..	..	172	..	335
..	8	..	..	..	..	2	1	..	..	..	..	..	..	..	..	18	..	35
346	3,190	568	172	12	40	1,366	144	42	179	76	41	5,090	13	8	28	15 045	1,931	31907

CHILD WELFARE SCHEME

Statement showing the Total Number of Attendance of Expectant and

Serial number	Centre	Attendants at Clinics								Total of New Attendants
		Infants		Pre-School children		Expectant Mothers		Nursing Mothers		
		New	Old	New	Old	New	Old	New	Old	
1	New Washermanpet ..	1,381	2,440	167	48	844	945	1,481	2,514	3,000
2	Grace Garden ..	580	751	80	44	495	435	680	817	1,000
3	Sanjeevirayanpet ..	1,336	4,482	121	82	863	860	1,637	5,670	3,000
4	Royapuram ..	469	377	71	15	387	347	599	425	1,000
5	Muthialpet ..	601	452	36	50	662	438	746	466	2,000
6	Ammen Koil (South).	1,372	4,676	243	2,040	821	1,316	1,861	4,961	4,000
7	Seven Wells (South) ..	1,262	4,288	323	424	863	1,548	1,669	4,562	4,000
8	Dr. V.R. Nagar ..	2,401	9,934	187	297	1,413	2,408	3,238	11,192	7,000
9	Kondithope ..	422	834	73	45	571	663	626	788	1,000
10	Peddunaickenpet ..	308	829	77	43	404	590	418	766	1,000
11	Trevelyan Basin ..	1,191	1,703	175	57	640	767	1,362	1,846	3,000
12	Elephant Gate ..	322	1,197	135	79	214	387	503	1,321	1,000
13	Perambur ..	1,411	1,556	420	408	1,027	1,128	2,602	2,906	5,000
14	Pullianthope ..	1,709	3,576	204	54	1,724	1,364	2,367	3,763	6,000
15	Thiru-vi-ka Nagar ..	648	879	97	26	741	801	1,027	879	2,000
16	Choolai ..	3,850	6,719	4,570	305	1,149	1,426	3,103	6,450	12,000
17	Hospital Maiden ..	576	1,663	102	124	525	722	768	1,661	1,000
18	Sembiam ..	1,350	5,108	120	103	994	3,260	2,998	5,962	5,000
19	Ayanavaram ..	1,793	5,678	470	312	1,048	1,535	2,195	5,947	5,000
20	Nammalwarpet ..	529	863	53	40	490	605	747	861	1,000
21	Otteri ..	696	697	22	..	1,126	513	967	791	2,000
22	Perumalpet ..	1,243	3,573	508	816	492	1,419	1,479	3,017	3,000
23	Purasawalkam ..	1,075	2,091	365	381	570	1,097	1,168	1,503	3,000
24	Kilpauk ..	911	2,006	83	38	535	714	1,118	2,094	2,000
25	Chetpet ..	922	4,034	545	3,870	628	1,371	1,059	4,377	3,000
26	Nungambakkam ..	461	164	35	9	408	144	548	188	1,000
27	Thousand Lights ..	554	845	107	86	338	382	554	718	1,000
28	Pudupakkam ..	1,546	5,834	364	474	990	1,429	2,042	6,262	4,000
29	Ashok Vihar ..	2,212	1,287	1,662	326	603	696	1,746	1,281	6,000
30	Park-Town ..	164	141	58	36	140	134	194	148	..
31	Chintadripet ..	519	569	89	83	637	735	890	911	2,000
32	Pudupet ..	486	913	177	50	399	332	701	788	1,000
33	Zambazaar }	984	1,291	323	171	702	733	988	1,116	2,000
34	Mirsahibpet }									
35	Durgapuram ..	688	829	226	156	578	529	649	678	2,000
36	Teynampet ..	536	555	362	100	792	448	822	652	2,000
37	Karneeswarapuram ..	615	580	109	51	905	840	839	737	2,000
38	R.A. Puram ..	487	410	82	25	541	355	594	455	1,000
39	Adyar ..	580	589	447	197	392	544	680	532	2,000
40	Vadapalani ..	3,280	8,846	611	18	1,774	3,134	4,587	8,747	9,000
41	Theyagaraya Nagar ..	469	404	105	9	400	378	539	357	1,000
42	Sathyamoorthi Nagar ..	258	142	47	3	396	283	330	142	1,000
43	Saidapet (North) ..	694	958	392	88	1,036	766	1,033	1,077	3,000
44	Periapet ..	4,087	11,811	2,958	4,687	1,499	1,250	4,147	11,167	12,000
45	Guindy ..	466	740	440	276	288	565	577	701	1,000
46	Agaram ..	69	129	46	42	35	59	81	141	..
Total ..		47,513	1,07,443	17,331	16,588	32,079	40,400	58,959	1,12,337	1,55,000

ing Mothers and Children at the Out-Patient Clinics in 1964.

Attendants	Grant Total	Diseases Treated (New)										Total
		Respiratory	Alimentary	Skin Affec- tion	Influenza	Ear and Eye Disease	Anaemia	Vitamin Diseases	Malaria	Normal	Other Diseases	
5,947	9,820	294	29	28	185	..	238	39	10	2,412	448	3,873
2,047	3,882	221	101	32	12	..	151	98	..	1,158	62	1,835
1,094	15,051	143	108	15	101	5	304	188	..	2,912	181	3,957
1,164	2,690	189	124	19	22	2	175	26	1	803	165	1,526
1,406	3,451	169	162	7	42	..	255	116	..	1,159	35	2,045
2,993	17,290	343	240	30	49	5	385	189	..	2,702	354	4,297
0,822	14,939	612	862	52	55	4	377	310	..	2,099	46	4,117
3,831	31,070	471	784	80	695	125	808	798	..	1,995	1,483	7,239
2,330	4,022	162	211	14	21	1	262	24	..	737	260	1,692
2,228	3,435	179	169	9	8	..	169	31	..	528	114	1,207
4,373	7,741	717	358	93	87	389	447	268	..	949	260	3,368
2,984	4,458	158	105	42	60	17	156	68	..	480	88	1,174
5,998	11,458	1,599	1,176	294	500	263	329	258	..	450	591	5,460
8,757	14,761	932	804	42	407	54	618	471	..	815	2,065	6,004
2,585	5,098	633	595	205	246	152	153	134	..	164	231	2,513
4,900	27,572	3,853	2,075	276	1,113	5	1,023	203	..	1,374	711	12,672
4,170	6,141	184	132	3	183	2	275	201	..	379	612	1,971
4,433	19,895	139	890	11	66	..	235	257	..	2,667	1,193	5,462
3,472	18,978	620	621	102	196	14	229	171	..	3,046	507	5,506
2,369	4,188	225	224	36	68	7	72	81	..	808	298	1,819
2,001	4,812	174	161	10	141	4	634	500	..	552	635	2,811
8,825	12,547	420	397	47	308	7	197	126	..	611	1,609	3,722
5,072	8,250	377	490	105	218	33	30	27	..	1,300	598	3,178
4,857	7,504	320	528	42	192	..	205	190	..	965	205	2,647
3,652	16,806	465	260	85	6	4	69	160	..	1,761	344	3,154
505	1,957	213	161	24	129	18	90	80	..	356	381	1,452
2,031	3,584	181	122	20	102	5	27	24	..	888	184	1,553
3,999	18,941	978	623	28	253	2	332	433	..	1,891	402	4,942
3,590	9,813	1,422	1,465	403	310	200	229	64	..	1,641	489	6,223
489	1,055	71	82	16	29	..	34	27	..	237	60	556
2,298	4,433	384	292	57	68	13	325	291	6	487	212	2,135
2,083	3,840	229	202	67	240	38	134	147	..	417	303	1,757
..	..	734	691	135	2	47	250	144	..	988	41	2,997
3,311	6,308	279	166	31	139	12	58	75	..	1,154	227	2,141
2,192	4,333	365	334	80	374	20	284	289	..	279	487	2,512
1,755	4,267	117	262	34	128	5	193	375	..	1027	327	2,468
2,208	4,676	140	336	25	49	4	107	244	..	795	204	1,704
1,245	2,949	333	188	142	101	1	204	219	..	643	271	2,099
1,862	3,961	2,377	1,358	136	393	112	983	409	..	1,361	2,576	9,702
20,745	3,044	130	128	12	56	..	170	64	..	818	188	1,513
1,148	2,661	81	131	15	48	..	69	97	..	513	77	1,031
570	1,661	418	399	119	440	41	444	368	..	343	583	3,155
2,889	6,044	2,371	1,600	262	514	17	328	342	..	16,116	1,141	12,691
28,915	41,606	284	63	109	101	6	189	145	..	502	260	1,771
2,282	4,053	38	36	2	22	..	..	8	..	100	25	231
76,768	4,32,650	24,744	20,232	3,796	8,479	1,634	12,246	8,739	17	54,291	21,703	1,55,882

Statement showing Maternal Morbidity during the year 1964

Serial Number.	Centre	Ante-Partum						Intra and Post-Partum							Puerperium							Total			
		Accidental Haemorrhage	Placenta Praevia	Anaemia	Abnormal presentation	Hydatiform Mole	Ectopic Gestation	Retained Placenta	Post-Partum Haemorrhage	Anatomical Abnormality Contracted pelvis	Malposition and disposition	Tedious Labour delayed 2 stage	Perineal and Cervical Inceration	Urinary complication	Puerperial Sepsis	Phlebitis, Thrombosis	Pyrexia	Uterine disorders	Puerperal toxaeimias	Anaemia	Psychosis		Diseases of Breasts	Other Diseases	
1	New Washermanpet	2	..	130	..	..	..	..	5	1	1	32	25	..	..	..	..	8	..	2	61	..	1	7	275
2	Grace Garden	..	..	35	..	..	..	..	..	..	..	15	..	..	..	..	..	13	..	..	38	..	..	..	101
3	Sanjeevirayanpet	9	..	73	12	..	..	2	11	..	..	31	102	1	..	..	..	9	1	8	87	..	..	31	377
4	Royapuram	..	..	30	2	..	..	1	1	..	..	7	4	5	..	..	..	5	..	..	33	..	2	..	90
5	Muthialpet	1	..	96	..	..	..	..	..	..	..	7	..	..	..	..	..	5	..	..	22	..	..	9	140
6	Ammen Koil (South).	7	1	98	3	..	..	..	..	2	..	25	49	..	..	..	..	14	..	2	46	..	1	25	273
7	Seven Wells (South)	7	..	146	17	..	..	..	5	..	1	25	31	..	..	..	..	12	..	..	47	..	..	22	313
8	Dr. Vijayaraghavalu Nagar	24	..	40	18	..	3	1	24	1	4	56	172	3	..	..	..	4	5	6	48	2	..	26	437
9	Kondithope	1	..	12	..	..	..	..	..	..	..	5	9	..	..	..	..	4	..	..	20	..	..	3	54
10	Peddunaickenpet	..	..	..	15	..	..	..	..	..	..	2	2	..	..	..	..	5	..	..	17	..	..	1	42
11	Trevelyan Basin	1	..	4	8	..	..	1	4	..	1	26	25	11	5	..	..	9	..	..	1	..	1	18	115
12	Elephant Gate	2	..	11	8	..	..	..	3	..	2	11	7	..	1	..	..	7	..	..	22	..	1	37	112
13	Perambur	7	..	13	..	..	..	2	12	..	..	25	16	5	1	..	..	3	..	..	34	..	..	15	133
14	Pulianthope	10	1	13	14	..	..	3	10	3	..	65	48	6	..	..	..	20	1	..	148	..	28	44	414
15	Thiru-vi-ka Nagar	..	..	23	5	..	..	1	3	..	..	19	4	4	..	..	..	10	..	..	27	..	1	8	105
16	Choolai	27	..	16	5	1	..	2	7	..	2	99	..	6	2	..	..	1	1	34	..	..	..	43	249
17	Hospital Maidan	..	..	..	..	..	..	1	2	..	..	3	3	..	..	..	..	2	..	..	..	..	..	..	11

18	Sembiam	6	..	1	..	3	..	41	..	7	..	..	5	..	..	..	80	
19	Agaram	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Ayanavaram	5	..	..	..	7	..	18	25	..	11	..	22	..	3	5	27			
21	Nammalwarpet	1	..	..	1	2	..	5	5	2	..	..	24	..	..	2	84
22	Otteri	..	..	..	..	2	..	3	..	..	..	..	..	..	..	1	7
23	Perumalpet	7	..	..	2	8	1	28	61	7	..	13	..	..	1	60	213		
24	Purasawalkam	5	1	..	2	5	2	24	29	3	8	11	7	..	..	2	123				
25	Kilpauk	..	..	..	1	..	3	1	12	9	1	..	17	..	..	1	72	
26	Chetpet	2	..	..	2	2	..	17	20	1	..	31	1	..	..	13	94		
27	Nungambakkam	1	..	..	..	2	..	6	8	..	2	5	23	..	..	9	72	
28	Thousand Lights	..	2	..	..	..	..	..	..	2	..	..	..	..	..	..	15
29	Pudupakkam	..	9	..	3	..	..	27	..	..	..	..	..	..	1	4	91
30	Durgapuram	3	..	..	1	..	..	14	4	..	..	2	..	3	2	2	35
31	Ashok Vihar	3	..	..	1	5	1	14	42	..	..	19	..	..	..	8	106
32	Park Town	..	..	..	..	..	..	..	..	..	..	..	..	..	10	2	32
33	Chintadripet	5	..	..	..	..	1	14	3	..	4	8	26	2	2	45	135		
34	Pudupet	..	..	..	..	1	..	3	5	..	1	..	20	..	..	..	60
35	Zam Bazaar	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	70
36	Mirshahibpet	..	..	..	..	1	..	11	..	1	..	20	30	1	1	..	107		
37	Teynampet	..	1	..	..	1	..	12	..	..	..	17	..	..	46	..	..				
38	Karneeswarapuram	3	..	..	..	2	2	13	5	2	4	16	37	..	..	1	102	
39	Raja Annamalaipuram	1	..	..	..	..	1	12	..	23	2	18	25	..	..	2	101
40	Adayar	2	..	..	2	..	2	13	18	..	2	2	..	..	4	4	60		
41	Vadapalani	9	..	..	1	16	31	35	135	..	18	..	277	..	..	34	939		
42	Theagaraya Nagar	..	..	..	1	2	1	..	..	1	..	..	..	..	..	1	13
43	Sathyamurthi Nagar	..	..	1	..	..	..	..	5	1	..	..	..	..	..	2	9
44	Saidapet (North)	..	..	..	..	..	..	..	..	..	..	11	36	..	12	..	78
45	Periapet	13	..	1	2	13	..	48	..	1	1	..	5	..	10	22	159						
46	Guindy	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	9
Total		165	15	944	309	3	6	34	162	53	61	813	878	10064	15	392	71	143	1189	28	149	786	6,380

Statement showing Infants born in 1963 and kept under Observation during the First year after Birth.

Serial Number.	Centre	No. of Infants born in 1963	No. of still Births in 1963	No. of live birth in 1963	Period										Total No. of Deaths excluding still births	Left the city or other wise	Said to be well	Out of Division	No. of living children in the city when an year old	Total No. of living children when an year old		
					1 to 7 days		8 days to 1 month		2 to 3 months		4 to 6 months		7 to 9 months								9 to 12 months	
					Died	Not traceable	Died	Not traceable	Died	Not traceable	Died	Not traceable	Died	Not traceable							Died	Not traceable
1	New Washermanpet..	986	22	964	17	13	15	1	19	1	18	13	17	17	17	28	103	73	120	62	726	
2	Grace Garden ..	255	1	254	4	..	4	..	6	4	8	2	1	1	3	5	31	12	34	..	211	
3	Sanjeevirayanpet ..	955	11	944	14	20	6	..	13	2	20	3	14	10	12	35	79	71	135	3	791	
4	Royapuram ..	200	7	193	6	..	5	..	3	1	2	1	4	..	3	1	23	3	22	..	167	
5	Muthialpet ..	274	9	265	4	..	3	..	2	..	7	..	2	..	..	4	18	4	46	..	243
6	Ammen Koil (South).	970	10	960	15	6	7	2	16	1	18	5	20	16	9	46	85	76	149	..	800	
7	Seven Wells (South) ..	760	4	756	13	17	7	1	12	4	6	12	14	17	12	7	64	58	155	..	634	
8	Dr. V.R. Nagar ..	1,617	47	1,570	26	17	23	5	44	27	49	64	30	54	19	54	191	221	193	25	1,133	
9	Kondithope ..	276	8	268	6	..	8	..	4	1	10	1	4	4	2	6	34	12	44	..	222	
10	Peddunaickenpet ..	110	7	103	1	..	..	..	1	..	1	..	..	1	1	2	4	3	19	..	96
11	Trevelyan Basin ..	872	14	858	17	14	4	3	18	4	15	6	9	11	9	19	72	65	236	4	717	
12	Elephant Gate ..	135	2	133	5	..	..	..	3	1	1	1	1	2	1	1	11	6	31	..	116
13	Perambur ..	698	8	690	12	2	5	3	5	2	5	2	8	12	7	26	42	47	184	7	594	
14	Pulianthope ..	1,890	47	1,843	44	54	25	11	13	30	36	37	35	46	28	62	181	240	249	5	1,400	
15	Thiru-vi-ka Nagar ..	289	6	283	5	..	4	1	2	..	4	1	4	3	5	9	24	9	52	..	250	
16	Choolai ..	1,647	24	1,623	21	28	10	13	16	11	19	23	15	33	26	74	107	184	357	..	1,332	
17	Hospital Maidan ..	92	6	86	2	..	1	1	..	..	..	1	..	1	1	..	4	3	19	..	60
18	Sembiam ..	995	24	971	22	9	11	2	9	5	17	12	7	3	1	61	67	94	125	83	727	

20	Ayanavaram	..	1,143	32	1,111	34	9	8	5	14	3	16	6	17	9	8	20	97	54	229	118	613	842
21	Nammalwarpet	..	190	7	183	6	1	3	..	3	..	3	..	1	1	1	3	17	5	24	..	137	161
22	Otteri	..	204	5	199	2	..	..	..	3	..	3	..	..	..	1	..	9	1	45	..	144	189
23	Perumalpet	..	798	16	782	9	9	4	4	3	1	9	4	8	7	10	26	43	51	103	98	585	688
24	Purasawalkam	..	881	20	861	15	19	10	5	18	3	12	9	9	6	9	26	73	68	168	..	552	720
25	Kilpauk	..	564	12	552	9	8	1	2	5	3	9	5	3	7	3	20	30	45	65	1	411	476
26	Chetpet	..	227	5	222	5	..	..	..	..	..	3	4	4	4	3	6	15	14	8	17	168	193
27	Nungambakkam	..	159	3	156	3	..	1	..	4	..	1	..	2	3	2	..	13	3	41	..	99	140
28	Thousand Lights	..	171	5	166	4	..	3	..	..	1	..	1	..	2	..	..	117	..	35	..	120	155
29	Pudupakkam	..	984	17	967	12	1	3	12	20	14	13	13	27	39	10	40	85	136	186	..	560	746
30	Durgapuram	..	252	4	248	5	..	4	1	7	..	2	..	..	..	..	..	18	1	47	..	182	229
31	Ashok Vihar	..	888	10	878	11	6	6	7	13	7	19	9	11	11	11	9	71	49	199	19	540	739
32	Park-Town	..	39	2	37	..	..	..	..	..	..	1	..	3	..	..	..	4	..	4	..	29	33
33	Chintadripet	..	240	3	237	1	..	1	..	3	1	6	1	5	3	1	4	17	9	44	..	167	211
34	Pudupet	..	207	4	203	6	..	3	..	3	..	4	2	2	..	1	..	19	2	48	..	134	182
35	Zambazzar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Mirsahibpet	..	331	10	321	12	..	1	1	10	7	12	12	10	6	8	3	53	29	35	..	204	239
37	Teynampet	..	342	5	337	3	..	5	..	3	2	4	2	9	6	7	5	31	15	34	..	257	291
38	Karneswarapuram	..	404	12	392	10	1	9	4	8	3	13	6	6	2	7	6	53	22	62	..	255	317
39	Raja Annamalaipuram	..	300	5	295	9	1	3	2	7	2	5	..	5	6	2	3	31	14	47	..	203	250
40	Adyar	..	448	9	439	8	3	..	..	1	2	3	2	1	1	2	..	15	8	35	60	321	356
41	Vadapalani	..	1,729	49	1,680	32	38	11	22	18	32	37	62	17	60	13	36	128	272	222	184	870	1,098
42	Theyagaraya Nagar	..	131	5	126	5	..	2	1	1	1	1	3	..	2	2	..	11	7	24	..	84	108
43	Sathyamoorthi Nagar	..	141	2	139	9	1	3	..	3	..	2	2	3	2	2	1	22	6	28	..	83	111
44	Saidapet (North)	..	141	2	139	..	5	..	..	1	..	2	4	..	2	3	2	11	8	15	..	105	120
45	Periapet	..	1,980	30	1,950	23	67	15	8	20	17	27	31	27	45	20	93	132	253	158	230	1,175	1,333
46	Guindy	..	85	..	85	1	..	..	..	..	..	4	..	..	..	..	..	5	..	10	..	77	80
Total		..	26,237	521	25,717	468	349	234	117	354	193	447	363	360	455	282	743	2,145	2,253	4,151	899	16,080	19,647

CHILD WELFARE SCHEME

Statement showing causes of deaths among infants born in 1963 and

Serial Number	Centre	Number of infants born in 1963	No. of still births in 1963	No. of live births in 1963	Neo-natal deaths					Infectious Diseases							Fevers				
					Pre-maturity	Asphyxia	Neo Natorum	Birth injuries	Congenital malformation and complications	Others	Cholera	Small-pox	Diphtheria	Measles	Enteric fever	Anterior Poliomyelitis	Meningitis	Others	Malaria	Kala Azar	Others
1	New Washermanpet ..	986	22	964	7	6	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..
2	Grace Garden ..	255	1	254	1	2	..	1	..	..	..	2	2	..	..	..	..	..	..	..	1
3	Sanjeevirayanpet ..	955	11	944	7	7	..	..	..	..	2	2	..	..	..	..	..	..	..	..	1
4	Royapuram ..	200	7	193	1	4	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..
5	Muthialpet ..	274	9	265	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Ammen Koil (South).	970	10	960	9	4	1	3	..	..	2	7	..	..	..	..	..	1	..	..	..
7	Seven Wells (South) ..	760	4	756	2	6	..	2	3	..	1	2	..	..	..	..	..	1	1	1	..
8	Dr. V.R. Nagar ..	1,617	47	1,570	29	9	1	1	1	2	6	..	..	..	..	..	..	1	..	..	2
9	Kondithope ..	276	8	268	5	2	..	3	4	..	..	..	..	..	..	..	..	..	..	..	..
10	Peddunaickenpet ..	110	7	103	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
11	Trevelyan Basin ..	872	14	858	8	5	..	..	3	..	..	..	..	..	..	..	..	9	..	..	9
12	Elephant Gate ..	135	2	133	2	2	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..
13	Perambur ..	698	8	690	8	5	..	1	3	..	1	..	..	..	..	..	..	..	..	..	..
14	Pulianthope ..	1,890	47	1,843	20	26	..	2	12	..	7	..	..	..	..	..	..	3	..	..	2
15	Thiru-vi-ka-Nagar ..	289	6	283	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Choolai ..	1,647	24	1,623	5	16	..	..	1	..	6	..	..	..	..	..	..	1	..	..	2
17	Hospital Maidan ..	92	6	86	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Sembiam ..	995	24	971	18	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19	Agaram ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Ayanavaram ..	1,143	32	1,111	17	12	2	3	8	..	..	..	2	..	..	..	..	1	..	..	..
21	Nammalwarpet ..	190	7	183	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Otteri ..	204	5	199	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	Perumalpet ..	798	16	782	3	5	1	..	3	..	1	..	..	..	..	..	..	..	..	..	..
24	Purasawalkam ..	881	20	861	6	7	6	1	..	..	2	..	..	..	..	..	..	4	..	..	..
25	Kilpauk ..	564	12	552	4	4	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
26	Chetpet ..	227	5	222	1	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
27	Nungambakkam ..	159	3	156	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
28	Thousand Lights ..	171	5	166	2	2	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..
29	Pudupakkam ..	984	17	967	5	7	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..
30	Durgapuram ..	252	4	248	6	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
31	Ashok Vihar ..	888	10	878	8	1	..	1	..	..	3	..	..	..	..	1	2	..	..	..	..
32	Park Town ..	39	2	37	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
33	Chintadripet ..	240	3	237	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
34	Pudupet ..	207	4	203	6	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35	Zam Bazaar }	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Mirsahibpet }	331	10	321	4	5	..	1	1	..	5	..	..	..	..	..	..	..	..	..	..
37	Teynampet ..	342	5	337	3	..	..	..	7	..	1	..	..	..	..	..	..	..	..	..	..
38	Karneeswarapuram ..	404	12	392	9	2	..	1	..	..	5	..	..	..	..	..	..	..	..	..	..
39	R.A. Puram ..	300	5	295	8	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
40	Adayar ..	448	9	439	2	..	2	2	..	..	1	..	..	..	..	..	..	..	..	..	..
41	Thiagaraya Nagar ..	131	5	126	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42	Sathyamurthi Nagar ..	141	2	139	7	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
43	Saidapet (North) ..	141	2	139	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44	Periapet ..	1,980	30	1,950	26	1	..	..	..	..	1	..	..	2	1	5	..	..	..	..	..
45	Guindy ..	85	..	85	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..
46	Vadapalani ..	1,729	49	1,680	23	..	..	..	1	..	5	..	..	..	..	..	..	..	..	..	1
Total ..		2,6155	522	25,633	285	171	15	31	49	2	54	11	4	3	1	6	24	2	2	16	..

under observation during First Year after Birth.

Others	Alimentary Diseases			Urinary Diseases		Liver Diseases		Congenital syphilis V.D.	Nervous Diseases				Deficiency Diseases			General Causes				Causes Unknown	Total No. of deaths excluding still births	Left the City or otherwise not traceable	Said to be well	Out of Division	No. of living Children in the City when one year old.	Total No. living Children when one year old
	Diarrhoea	Dysentery	Others	Nephritis	Others	Currhosis	Others		Convulsion	Tetanus	T.B. Meningitis	Others	Rickets	Malnutrition	Others	Septicaemia and Pyaemia	Accident injuries etc.	Snake bite etc.	Others							
4	32	..	9	..	..	..	..	..	2	..	..	..	..	7	2	..	1	..	3	..	103	73	120	62	606	726
3	6	2	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	31	12	34	..	177	211
9	18	2	..	..	..	..	..	..	1	..	..	..	2	6	..	..	..	..	..	..	79	71	135	3	656	791
..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23	3	22	..	140	167
..	6	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	18	6	46	..	197	243
2	10	2	3	..	3	..	..	..	..	..	..	..	..	2	..	2	..	1	..	6	85	76	149	149	650	800
..	20	2	1	1	..	..	..	..	2	..	..	..	..	4	..	..	..	..	..	2	64	58	185	..	449	634
43	17	8	..	..	..	..	2	..	2	1	..	..	..	38	..	..	..	1	..	..	191	221	193	25	940	1,133
1	5	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	34	12	44	..	178	722
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4	3	19	..	77	96
..	18	..	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	72	65	236	..	481	717
..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	6	31	..	185	116
1	12	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	1	42	47	184	7	410	594
6	56	..	..	..	..	..	2	..	7	..	..	..	..	20	..	..	..	..	..	..	198	240	249	5	1,151	1,400
..	3	1	..	..	..	..	..	..	2	..	..	..	..	2	..	..	..	..	..	2	24	9	52	..	198	250
3	30	8	1	..	..	..	..	..	..	..	..	2	..	1	2	..	..	..	4	2	107	184	357	..	975	1,332
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	19	..	60	79
..	14	2	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	67	94	125	85	602	727
..
..	22	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	97	54	229	118	613	842
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	17	5	24	..	137	116
..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	9	1	45	..	144	189
..	12	3	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	43	51	103	98	585	688
..	23	3	1	..	..	..	..	..	5	..	..	..	1	6	..	..	..	..	..	1	73	68	168	..	552	720
1	13	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30	45	65	1	411	476
1	4	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	15	14	8	17	168	193
..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	13	3	41	41	99	140
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	..	35	..	120	155
..	39	2	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	1	85	136	186	..	560	746
1	1	2	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	18	1	47	..	182	229
1	14	2	6	..	..	..	1	..	3	..	..	..	..	2	..	..	..	..	..	5	71	49	199	19	540	739
..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	4	..	4	..	29	33
..	3	1	..	1	..	..	..	..	1	..	..	..	..	2	..	1	..	..	1	2	17	9	44	..	167	211
1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19	2	48	48	134	182
..
1	18	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	53	31	35	..	204	239
..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	31	15	34	..	257	291
..	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53	22	62	..	255	317
10	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	31	14	47	..	203	250
..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	15	8	35	60	321	356
..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	11	7	24	..	84	108
..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	22	6	28	..	83	111
..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	8	15	..	105	120
12	3	4	2	..	..	..	2	1	2	..	1	..	..	2	1	2	..	..	3	..	134	253	158	230	1,175	1,333
..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	10	..	70	80
..	42	1	..	..	..	..	..	1	6	..	..	..	..	9	1	2	..	..	..	7	128	272	227	183	870	1,098
00	489	55	17	7	3	2	10	3	37	4	1	2	4	115	6	11	3	2	112	37	1973	2257	4131	968	16199	20310

CHILD WELFARE SCHEME

STATISTICS STATEMENT No. 9

Statement showing deaths among cases brought under the care of Child Welfare Scheme, during the year 1964.

Sl. No.	Centre	Number of Deaths	Cause of Deaths
1	New Washermanpet ..	3	Heart failure: Intra and Post Partum Haemorrhages and Cholera.
2	Muthialpet ..	1	Accidental Haemorrhage.
3	Ammen Koil St. ..	1	Heart failure.
4	Dr. V.R. Nagar ..	1	Eclamsia.
5	T.B. Centre ..	1	Intra and Post Partum Haemorrhage.
6	Perambur ..	1	Retained Placenta.
7	Pulianthope ..	1	Accidental Haemorrhage.
8	Choolai Medu ..	1	Small pox, Measles, etc.
9	Ayanavaram ..	1	Pulmonary Emolsion.
10	Perumalpet ..	3	Obstetric Shock, Diabetic Coma and Pulmonary Emolsion.
11	Pudupakkam ..	2	Obstetric, Shock, and Puperperal sepsis.
12	Durgapuram ..	1	Pulmonary Emolsion.
13	Pudupet ..	1	Tubercular enteritis.
14	Vadapalani ..	1	Obstetric Shock.
15	Saidapet (North) ..	1	Puperperal Mania.
16	Periapet M.A. ..	1	Heart failure.
Total		21	

CHILD WELFARE SCHEME

STATISTICS SUPPLEMENT No. 10

Statement showing the number of Labour cases that came under the care and observation of Child Welfare Scheme—Infant mortality rate and Maternal mortality rate of Child Welfare Scheme from the years 1940 to 1964

Year	No. of labour cases that came under the care and observation	Infant mortality rate among live Births	Maternal mortality rate
1940 ..	14,489	115.80	2.50
1941 ..	14,984	103.40	2.60
1942 ..	8,390	104.40	3.00
1943 ..	11,227	113.50	2.40
1944 ..	10,591	140.60	2.20
1945 ..	14,002	141.90	1.57
1946 ..	19,147	102.80	2.50
1947 ..	18,412	81.70	1.95
1948 ..	26,051	83.00	1.91
1949 ..	28,129	70.41	2.31
1950 ..	26,957	95.52	2.00
1951 ..	26,931	123.16	1.90
1952 ..	32,264	125.43	1.73
1953 ..	27,219	114.23	1.76
1954 ..	29,219	110.31	1.27
1955 ..	32,285	105.75	1.39
1956 ..	31,267	109.30	1.15
1957 ..	31,955	108.25	0.94
1958 ..	30,671	104.32	1.01
1959 ..	29,709	99.40	0.64
1960 ..	29,087	94.51	0.89
1961 ..	29,581	93.29	1.09
1962 ..	28,531	86.28	0.77
1963 ..	26,237	81.98	0.49
1964 ..	27,677	83.46	0.76

Statement showing the Sereological examination of blood conducted
during the year 1964.

S. No.	Centres	Total No. of Blood samples examined	No. of +ve cases	No. of +ve cases that took full course of treatment	No. of +ve cases that took partial treatment	No. of cases that did not turn up for treatment
1	New Washermanpet ..	553	20	15	1	4
2	Sanjeevirayanpet ..	777	16	13	1	2
3	Ammen Koil (South) ..	742	24	12	..	12
4	Seven Wells (South) ..	782	23	11	3	9
5	Dr. V. R. Nagar ..	1,284	44	22	..	22
6	Trevelyan Basin ..	428	17	2	5	10
7	Elephant Gate ..	193	7	1	5	1
8	Perambur ..	110	2	..	..	2
9	Pulianthope ..	1,535	48	..	16	32
10	Choolai Maty. Home ..	1,149	22	3	..	19
11	Sembiam ..	897	32	5	..	27
12	Ayanavaram ..	987	28	17	4	7
13	Perumalpet ..	457	8	7	..	1
14	Purasawalkam ..	500	15	12	..	3
15	Kilpauk ..	441	11	3	..	8
16	Chetpet ..	532	29	22	2	5
17	Pudupakkam ..	900	16	12	2	2
18	Ashok Vihar ..	547	18	13	2	3
19	Adyar ..	394	20	16	..	4
20	Vadapalani ..	1,648	72	17	12	43
21	Periapet Maty. Home ..	1,052	41	7	7	27
		15,908	523	210	60	243

CHILD WELFARE SCHEME

STATISTICS SUPPLEMENT No. 1

Statement showing immunisation of Children with triple Antigen

Name of the Centre	No. to whom the 1st injection was given	No. to whom the 2nd injection was given	No. to whom the 3rd injection was given
New Washermanpet ..	1	1	1
Grace Garden ..	67	26	19
Sanjeevirayanpet ..	70	35	22
Royapuram ..	30	8	3
Ammen Koil (South) ..	79	29	11
Muthialpet ..	9	6	3
Seven Wells (South) ..	85	42	28
Dr. V.R. Nagar ..	84	47	50
Kondithope ..	22	5	1
Pedunaickenpet ..	30	11	3
Trevelyan Basin ..	91	35	20
Elephant Gate ..	17	22	11
Perambur ..	28	..	..
Pulianthope ..	84	20	10
Thiru-vi-ka Nagar ..	8	4	4
Choolai Maty. Home ..	83	21	9
Hospital Maidan ..	20	15	7
Sembiam ..	26	13	10
Ayanavaram ..	216	93	37
Perumalpet ..	152	103	81
Purasawalkam ..	190	117	90
Kilpauk ..	14	4	..
Chetpet ..	167	116	79
Nungambakkam ..	38	24	15
Thousand Lights ..	45	39	27
Pudupakkam ..	156	67	41
Park-Town ..	1	..	..
Ashok-Vihar ..	2,042	797	528
Chintadripet ..	15	3	2
Pudupet ..	126	62	41
Mirsahibpet and Zambazaar ..	44	18	..
Royapetta ..	34	27	12
Teynampet ..	36	13	2
Karneeswarapuram ..	17	2	3
Raja Annamalaipuram ..	17	12	3
Adyar ..	99	122	122
Vadapalani ..	79	52	37
T. Nagar (North) ..	45	33	28
Sathyamurthi Nagar ..	22	1	1
Saidapet (North) ..	176	76	45
Periapet Maty. Home ..	327	113	70
Guindy ..	71	83	151
	4,963	2,317	1,627

CHILD WELFARE SCHEME

STATISTICS SUPPLEMENT No. 13

Statement showing the total number of priority milk consumers during the year 1964.

Centre	Expectant Mothers	Nursing Mothers	Infants	Toddlers	Total
New Washermanpet	54	..	54
Grace Garden	53	..	53
Sanjeevirayanpet	117	..	117
Royapuram	161	..	61
Ammen Koil (South)	104	..	104
Muthialpet	39	..	39
Seven Wells	80	..	80
Dr. V.R. Nagar	106	..	106
Kondithope	87	..	87
Pedunaickenpet	53	..	53
Trevelyan Basin	160	..	60
Elephant Gate	78	..	78
Perambur	77	..	77
Pulianthope	75	..	75
Thiru-vi-ka Nagar	64	..	64
Choolai Maty. Home	52	..	52
Hospital Maidan	87	..	87
Agaram
Sembiam	27	..	27
Ayanavaram	54	..	54
Nammalwarpet
Otteri	85	..	85
Perumalpet	88	1	89
Pursawalkam	85	..	85
Kilpauk	40	..	40
Chetpet	39	..	39
Nungambakkam	73	..	73
Thousand Lights	89	..	89
Pudupakkam	89	..	89
Park Town	32	..	32
Ashok Vihar	111	..	111
Chintadripet	72	..	72
Pudupet	56	..	56
Mirsaibpet and Zambazzar	74	..	74
Royapettah	75	..	75
Teynampet	68	..	68
Karneesvarapuram	43	..	43
Raja Annamalaipuram	43	..	43
Adyar	61	..	61
Vadapalani	63	..	63
Theagaraya Nagar	95	1	96
Sathyamurthy Nagar	20	12	32
Saidapet (North)	64	..	64
Periapet Maty. Home	87	..	87
Guindy	66	..	66
	202	280	2,945	14	2,960

CHILD WELFARE SCHEME

Annual Report for

Serial Number	Centre	Brought under Care			
		Total number of mothers whether they had pre-natal care or not before confinement	Ante-natal	Labour	Pre-school
1	New Washermanpet	1,919	844	1,094	726
2	Grace Garden	1,071	495	235	211
3	Sanjeevirayanpet	2,058	863	1,024	791
4	Royapuram	971	387	186	162
5	Muthialpet	652	662	245	274
6	Ammen Koil (South)	1,109	821	1,074	800
7	Seven wells (South)	1,349	863	841	634
8	Dr. V.R. Nagar	2,845	1,413	1,823	1,133
9	Kondithope	872	571	237	222
10	Peddunaickenpet	490	404	98	96
11	Trevelyan Basin	1,626	640	925	128
12	Elephant Gate	323	214	145	116
13	Perambur	1,924	1,027	893	698
14	Pulianthope	2,326	1,724	1,985	1,400
15	Thiru-Vi-Ka Nagar	756	741	275	250
16	Choolai Maty. Home	1,842	1,149	1,658	1,647
17	Hospital Maidan	1,026	525	96	90
18	Sembiam	1,576	994	1,066	995
19	Agaram	87	35	33	..
20	Ayanavaram	1,543	1,048	1,298	842
21	Nammalwarpet	740	490	176	137
22	Otteri	1,924	1,126	198	204
23	Perumalpet	942	492	1,044	688
24	Pursawalkam	964	570	538	720
25	Kilpauk	1,005	535	417	462
26	Chetpet	1,656	628	468	193
27	Nungambakkam	582	408	162	140
28	Thousand Lights	533	338	169	155
29	Pudupakkam	990	990	982	946
30	Royapettah (Durgapuram)	912	578	263	221
31	Ashok Vihar	1,233	603	836	514
32	Chintadripet	1,826	637	216	237
33	Park-Town	140	140	26	38
34	Pudupet	671	399	191	182
35	Zam Bazaar	1,113	702	332	239
36	Mirsahibpet				
37	Teynampet	1,134	792	300	291
38	Karneeswarapuram	1,064	905	425	392
39	Raja Annamalaipuram	766	541	304	281
40	Adyar	471	392	520	358
41	Vadapalani	2,655	1,774	1,848	11,022
42	T. Nagar	585	400	142	126
43	Sathyamurthy Nagar	638	396	134	139
44	Saidapet (North)	1,346	1,036	154	120
45	Periapet Maty. Home	1,844	1,499	2,146	2,958
46	Guindy	351	288	102	80
		51,307	30,939	27,677	22,020

the year 1964.

Home Visits									
Woman Medical Officer					Health Visits				
Ante-natal	Post-natal	Infants	Toddler	Total	Anti-natal	Post-natal	Infants	Toddlers	Total
79	125	215	171	590	1	87	5,357	739	6,184
32	181	76	318	607	7	79	1,164	302	1,552
63	294	108	401	866	76	208	6,334	633	7,251
16	117	30	150	313	..	89	1,076	220	1,385
53	158	164	245	620	..	489	1,358	440	2,287
44	241	131	301	717	..	871	2,513	1,272	4,656
34	166	89	204	493	224	917	4,947	5,080	11,168
38	488	196	155	877	11	451	6,760	1,113	8,335
47	190	45	102	384	..	173	1,213	406	1,792
4	37	90	11	142	..	350	1,039	280	1,669
80	280	115	330	805	..	316	7,047	1,456	8,819
62	22	173	76	333	94	23	1,537	153	1,807
46	172	143	349	710	..	976	1,762	655	3,393
34	370	138	731	1,273	..	1,684	8,104	1,962	11,760
57	67	132	147	403	..	271	2,429	480	3,180
..	375	435	675	1,485	106	274	7,711	1,415	9,506
41	85	54	283	463	..	72	1,406	281	1,759
17	185	140	413	755	..	811	2,596	814	4,221
11	24	4	13	52	..	73	434	21	528
49	169	205	415	838	7	36	3,496	786	4,325
68	77	96	135	376	..	239	1,969	385	2,593
19	158	60	285	522	..	82	1,574	565	2,221
134	28	307	319	788	5	33	3,044	364	3,446
101	92	362	575	1,130	62	194	3,345	528	4,129
16	150	226	131	523	22	136	2,172	428	2,758
48	70	124	465	707	..	34	2,133	241	2,408
12	157	58	81	308	..	251	763	198	12,125
12	71	137	8	228	7	68	1,062	126	1,263
19	158	216	441	834	80	936	8,434	678	10,128
16	116	201	19	352	6	88	917	201	1,212
53	138	98	183	472	..	536	3,216	540	4,292
75	77	132	85	369	..	95	1,564	251	1,910
12	28	65	72	177	..	53	1,066	113	1,232
6	170	37	35	248	..	218	684	190	1,092
63	232	46	..	341	..	8	1,908	284	2,200
34	168	136	38	376	..	318	2,624	362	3,304
..	176	230	70	476	..	153	1,822	310	2,285
..	79	452	50	581	..	79	1,718	364	2,161
11	132	550	60	753	..	272	1,409	205	1,886
223	270	376	328	1,197	..	1,384	11,380	1,054	13,818
36	71	133	98	338	..	104	1,814	125	2,043
24	68	108	126	326	..	251	1,708	147	2,106
25	90	105	57	277	..	493	4,196	536	5,225
5	141	401	182	729	..	797	8,494	555	9,846
59	51	275	67	452	..	155	1,079	104	1,338
1,866	6,686	7,549	9,328	25,429	708	15,174	1,37,312	27,249	1,80,443

CHILD WELFARE SCHEME—(contd.)

Annual Report for

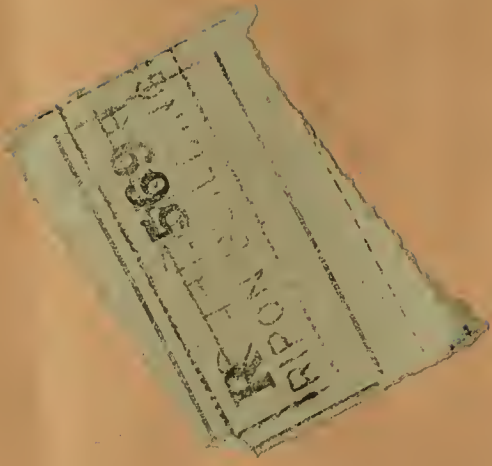
Serial Number	Centre	Midwives			Clinics	
		Ante-natal	Post-natal	Total	Ante-natal	
					No. held	Attendance
1	New Washermanpet ..	916	6,013	6,929	152	84
2	Grace Garden ..	853	2,247	3,100	93	49
3	Sanjeevirayanpet ..	2,384	4,595	6,979	149	86
4	Royapuram ..	584	2,146	2,730	157	38
5	Muthialpet ..	479	3,368	3,847	157	65
6	Ammen Koil (South) ..	588	4,741	5,329	139	82
7	Seven Wells (South) ..	1,064	4,183	5,247	142	86
8	Dr. V.R. Nagar ..	3,222	10,179	13,401	152	1,41
9	Kondithope ..	735	2,897	3,632	146	57
10	Peddunaickenpet ..	495	1,468	1,963	125	40
11	Trevelyan Basin ..	1,049	3,141	4,190	42	64
12	Elephant Gate ..	1,184	634	1,818	97	60
13	Perambur ..	897	4,457	5,354	137	1,02
14	Pulianthope ..	1,080	8,703	9,783	142	1,72
15	Thiru-Vi-Ka Nagar ..	756	3,285	4,041	100	74
16	Choolai Maty. Home ..	921	5,500	6,421	119	1,14
17	Hospital Maidan ..	481	2,504	2,985	134	52
18	Sembiam ..	726	5,204	5,930	120	99
19	Agaram ..	57	292	349	17	3
20	Ayanavaram ..	800	1,550	2,350	157	1,31
21	Nammalwarpet ..	756	1,850	2,606	92	41
22	Otteri ..	799	5,312	6,111	143	1,12
23	Perumalpet ..	461	1,621	2,082	156	49
24	Pursawalkam ..	795	1,324	2,119	150	57
25	Kilpauk ..	513	2,582	3,195	138	83
26	Chetpet ..	1,501	2,197	3,698	146	62
27	Nungambakkam ..	544	1,627	1,171	146	40
28	Thousand Lights ..	533	1,652	2,185	156	33
29	Pudupakkam ..	843	3,995	4,838	153	99
30	Royapettah (Durgapuram) ..	640	2,029	2,669	158	1,12
31	Ashok Vihar ..	610	3,126	3,736	83	60
32	Chintadripet ..	314	2,260	2,574	164	4,43
33	Park-Town ..	244	528	772	157	14
34	Pudupet ..	588	1,673	2,261	151	39
35	Zam Bazaar ..	799	3,324	4,123	157	70
36	Mirsahibpet }					
37	Teynampet }	686	1,731	2,417	157	79
38	Karneeswarapuram ..	1,065	4,250	5,315	104	90
39	Raja Annamalaipuram ..	766	2,018	2,784	118	54
40	Adyar ..	480	1,481	1,961	116	39
41	Vadapalani ..	1,183	7,234	8,417	155	1,77
42	T. Nagar ..	397	1,752	2,149	137	40
43	Sathyamurthy Nagar ..	424	1,387	1,811	145	39
44	Saidapet (North) ..	664	2,100	2,764	157	1,03
45	Periapet Maty. Home ..	517	4,783	5,300	157	1,49
46	Guindy ..	462	1,101	1,503	105	28
		35,651	1,39,516	1,75,167	5,821	37,157

STATISTICS SUPPLEMENT No. 14—(contd.)

the year 1964

Clinics—(contd.)								Mortality and Morbidity	
Post-natal		Well baby		Mother Craft		Group fathers		Mortality	Morbidity
No. held	Attendance	No. held	Attendance	No. held	Attendance	No. held	Attendance		
55	91	92	298	..	..	299	1,270	3	275
51	104	49	279	106	2,488	50	789	..	101
44	202	85	409	469	89	886	90	..	377
39	46	51	238	157	1,748	50	640	..	90
40	144	44	278	53	335	5	157	1	140
45	215	89	446	290	3,558	..	..	1	273
44	204	92	656	142	863	286	2,177	..	313
50	166	95	555	141	2,184	246	3,523	1	437
48	71	46	279	49	146	146	735	..	54
48	85	60	295	118	747	120	896	..	42
42	175	55	1,191	96	1,160	97	1,838	1	115
54	153	54	390	54	186	202	1,728	..	112
70	68	70	195	75	322	137	1,027	1	133
39	195	77	424	63	545	170	1,638	1	414
41	136	46	292	36	283	33	232	..	105
58	172	100	440	158	996	..	..	1	249
34	94	52	207	41	209	134	525	..	11
54	205	83	349	42	250	39	258	..	80
5	20	12	47	9	47	22	55	..	..
46	190	94	599	99	534	190	247	1	273
37	135	43	280	40	261	30	210	..	84
37	114	45	180	147	227	143	1,126	..	7
52	291	200	508	52	291	..	..	3	13
44	172	84	566	40	1,152	278	1,308	..	128
40	99	79	361	38	320	257	995	..	72
42	206	84	293	84	293	146	628	..	94
52	109	52	369	30	434	22	309	..	72
53	94	53	587	36	180	48	485	..	15
51	244	93	565	45	1,582	..	..	2	91
52	139	52	625	36	188	63	568	1	35
31	103	101	465	179	1,333	..	..	..	106
54	153	53	300	53	238	217	1,428	..	142
26	48	38	185	39	246	63	223	..	20
22	78	52	276	25	300	27	267	1	60
53	119	53	396	12	96	41	459	..	60
51	206	53	500	47	1,410	..	..	..	107
51	111	51	318	50	670	206	1,334	..	118
48	85	51	286	47	580	217	1,492	..	97
82	302	114	614	78	1,863	68	1,560	..	22
46	495	93	602	300	5,760	..	..	1	969
52	119	55	223	46	421	50	513	..	18
50	65	56	158	45	347	53	441	..	9
52	191	52	542	50	1,514	..	..	1	78
53	339	107	1,147	53	938	..	..	1	159
54	129	98	491	92	1,908	5,314	38	..	4
2,096	6,834	3,120	18,519	3,823	38,996	5,034	32,386	21	6,214

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